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of breast cell proliferative disorders

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Die angehefteten Stücke sind eine richtige und genaue Wiedergabe der ursprünglichen Unterlagen dieser Patentanmeldung.

München, den 2. November 2005
Deutsches Patent- und Markenamt
Der Präsident
Im Auftrag

Schmidt C.

Method and nucleic acids for the improved treatment of breast cell proliferative disorders

Field of the Invention

The levels of observation that have been studied by the methodological developments of recent years in molecular biology, are the genes themselves, the translation of these genes into RNA, and the resulting proteins. The question of which gene is switched on at which point in the course of the development of an individual, and how the activation and inhibition of specific genes in specific cells and tissues are controlled is correlatable to the degree and character of the methylation of the genes or of the genome. In this respect, pathogenic conditions may manifest themselves in a changed methylation pattern of individual genes or of the genome.

DNA methylation plays a role, for example, in the regulation of the transcription, in genetic imprinting, and in tumorigenesis. Therefore, the identification of 5-methylcytosine as a component of genetic information is of considerable interest. However, 5-methylcytosine positions cannot be identified by sequencing since 5-methylcytosine has the same base pairing behaviour as cytosine. Moreover, the epigenetic information carried by 5-methylcytosine is completely lost during PCR amplification.

A relatively new and currently the most frequently used method for analysing DNA for 5-methylcytosine is based upon the specific reaction of bisulfite with cytosine which, upon subsequent alkaline hydrolysis, is converted to uracil which corresponds to thymidine in its base pairing behaviour. However, 5-methylcytosine remains unmodified under these conditions. Consequently, the original DNA is converted in such a manner that methylcytosine, which originally could not be distinguished from cytosine by its hybridisation behaviour, can now be detected as the only remaining cytosine using "normal" molecular biological techniques, for example, by amplification and hybridisation or sequencing. All of these techniques are based on base pairing which can now be fully exploited. In terms of sensitivity, the prior art is defined by a method which encloses the DNA to be analysed in an

agarose matrix, thus preventing the diffusion and renaturation of the DNA (bisulfite only reacts with single-stranded DNA), and which replaces all precipitation and purification steps with fast dialysis (Olek A, Oswald J, Walter J. A modified and improved method for bisulphite based cytosine methylation analysis. *Nucleic Acids Res.* 1996 Dec 15;24(24):5064-6). Using this method, it is possible to analyse individual cells, which illustrates the potential of the method. However, currently only individual regions of a length of up to approximately 3000 base pairs are analysed, a global analysis of cells for thousands of possible methylation events is not possible. However, this method cannot reliably analyse very small fragments from small sample quantities either. These are lost through the matrix in spite of the diffusion protection.

An overview of the further known methods of detecting 5-methylcytosine may be gathered from the following review article: Rein, T., DePamphilis, M. L., Zorbas, H., *Nucleic Acids Res.* 1998, 26, 2255.

To date, barring few exceptions (e.g., Zeschnigk M, Lich C, Buiting K, Doerfler W, Horsthemke B. A single-tube PCR test for the diagnosis of Angelman and Prader-Willi syndrome based on allelic methylation differences at the SNRPN locus. *Eur J Hum Genet.* 1997 Mar-Apr;5(2):94-8) the bisulfite technique is only used in research. Always, however, short, specific fragments of a known gene are amplified subsequent to a bisulfite treatment and either completely sequenced (Olek A, Walter J. The pre-implantation ontogeny of the H19 methylation imprint. *Nat Genet.* 1997 Nov;17(3):275-6) or individual cytosine positions are detected by a primer extension reaction (Gonzalzo ML, Jones PA. Rapid quantitation of methylation differences at specific sites using methylation-sensitive single nucleotide primer extension (Ms-SNuPE). *Nucleic Acids Res.* 1997 Jun 15;25(12):2529-31, WO 95/00669) or by enzymatic digestion (Xiong Z, Laird PW. COBRA: a sensitive and quantitative DNA methylation assay. *Nucleic Acids Res.* 1997 Jun 15;25(12):2532-4). In addition, detection by hybridisation has also been described (Olek et al., WO 99/28498).

Further publications dealing with the use of the bisulfite technique for methylation detection in individual genes are: Grigg G, Clark S. Sequencing 5-methylcytosine residues in genomic DNA. *Bioessays.* 1994 Jun;16(6):431-6, 431; Zeschnigk M, Schmitz B, Dittrich B, Buiting K, Horsthemke B, Doerfler W. Imprinted segments in the human genome: different DNA methylation patterns in the Prader-Willi/Angelman syndrome region as determined by the

genomic sequencing method. Hum Mol Genet. 1997 Mar;6(3):387-95; Feil R, Charlton J, Bird AP, Walter J, Reik W. Methylation analysis on individual chromosomes: improved protocol for bisulphite genomic sequencing. Nucleic Acids Res. 1994 Feb 25;22(4):695-6; Martin V, Ribieras S, Song-Wang X, Rio MC, Dante R. Genomic sequencing indicates a correlation between DNA hypomethylation in the 5' region of the pS2 gene and its expression in human breast cancer cell lines. Gene. 1995 May 19;157(1-2):261-4; WO 97/46705, WO 95/15373, and WO 97/45560.

An overview of the Prior Art in oligomer array manufacturing can be gathered from a special edition of Nature Genetics (Nature Genetics Supplement, Volume 21, January 1999), published in January 1999, and from the literature cited therein.

Fluorescently labelled probes are often used for the scanning of immobilised DNA arrays. The simple attachment of Cy3 and Cy5 dyes to the 5'-OH of the specific probe are particularly suitable for fluorescence labels. The detection of the fluorescence of the hybridised probes may be carried out, for example via a confocal microscope. Cy3 and Cy5 dyes, besides many others, are commercially available.

Matrix Assisted Laser Desorption Ionization Mass Spectrometry (MALDI-TOF) is a very efficient development for the analysis of biomolecules (Karas M, Hillenkamp F. Laser desorption ionization of proteins with molecular masses exceeding 10,000 daltons. Anal Chem. 1988 Oct 15;60(20):2299-301). An analyte is embedded in a light-absorbing matrix. The matrix is evaporated by a short laser pulse thus transporting the analyte molecule into the vapour phase in an unfragmented manner. The analyte is ionised by collisions with matrix molecules. An applied voltage accelerates the ions into a field-free flight tube. Due to their different masses, the ions are accelerated at different rates. Smaller ions reach the detector sooner than bigger ones.

MALDI-TOF spectrometry is excellently suited to the analysis of peptides and proteins. The analysis of nucleic acids is somewhat more difficult (Gut I G, Beck S. DNA and Matrix Assisted Laser Desorption Ionization Mass Spectrometry. Current Innovations and Future Trends. 1995, 1; 147-57). The sensitivity to nucleic acids is approximately 100 times worse than to peptides and decreases disproportionally with increasing fragment size. For nucleic acids having a multiply negatively charged backbone, the ionization process via the matrix is

considerably less efficient. In MALDI-TOF spectrometry, the selection of the matrix plays an eminently important role. For the desorption of peptides, several very efficient matrixes have been found which produce a very fine crystallization. There are now several responsive matrixes for DNA, however, the difference in sensitivity has not been reduced. The difference in sensitivity can be reduced by chemically modifying the DNA in such a manner that it becomes more similar to a peptide. Phosphorothioate nucleic acids in which the usual phosphates of the backbone are substituted with thiophosphates can be converted into a charge-neutral DNA using simple alkylation chemistry (Gut IG, Beck S. A procedure for selective DNA alkylation and detection by mass spectrometry. Nucleic Acids Res. 1995 Apr 25;23(8):1367-73). The coupling of a charge tag to this modified DNA results in an increase in sensitivity to the same level as that found for peptides. A further advantage of charge tagging is the increased stability of the analysis against impurities which make the detection of unmodified substrates considerably more difficult.

Genomic DNA is obtained from DNA of cell, tissue or other test samples using standard methods. This standard methodology is found in references such as Fritsch and Maniatis eds., Molecular Cloning: A Laboratory Manual, 1989.

Breast cancer is currently the second most common type of cancer amongst women. In 2001 over 190,000 new cases of invasive breast cancer and over 47, 000 additional cases of *in situ* breast cancer were diagnosed. Incidence and death rates increase with age, for the period 1994 - 1998 the incidence of breast cancer amongst women between the ages of 20 and 24 was only 1.5 per 100,000 population. However the risk increases to 489.7 within the age group 75 - 79. Mortality rates have decreased by approximately 5% over the last decade and factors affecting 5 year survival rates include age, stage of cancer, socioeconomic factors and race.

Breast cancer is defined as the uncontrolled proliferation of cells within breasts tissues. Breasts are comprised of 15 to 20 lobes joined together by ducts. Cancer arises most commonly in the duct, but is also found in the lobes with the rarest type of cancer termed inflammatory breast cancer.

It will be appreciated by those skilled in the art that there exists a continuing need to improve methods of early detection, classification and treatment of breast cancers. In contrast to the

detection of some other common cancers such as cervical and dermal there are inherent difficulties in classifying and detecting breast cancers.

The first step of any treatment is the assessment of the patient's condition comparative to defined classifications of the disease. However the value of such a system is inherently dependant upon the quality of the classification. Breast cancers are staged according to their size, location and occurrence of metastasis. Methods of treatment include the use of surgery, radiation therapy, chemotherapy and endocrine therapy, which are also used as adjuvant therapies to surgery.

Endocrine therapies have been developed in order to block the effects of estrogen on cancer cells or to reduce serum estrogen levels. Tamoxifen (TAM) is the most widely used antioestrogenic drug for breast cancer patients. It acts blocking estrogen stimulation of breast cancer cells, inhibiting both translocation and nuclear binding of estrogen receptor. TAM is used in adjuvant setting for primary breast cancer patients and for the treatment of metastatic disease and its effectiveness has been proved in several clinical trials. Treatment for five years reduces annual disease recurrence by 47% and annual deaths by 26% and this reduction is similar in different age groups. Also it reduces the incidence of developing contralateral breast tumours. TAM is among the least toxic antineoplastic agents but as it has estrogenic properties in some tissues, it increases by 3 folds the risk of endometrial cancer. Other endocrine therapies include aromatase inhibitors, which block the enzyme aromatase in adipose tissue (the main source of estrogen in postmenopausal women) and lead to reduced or abolished production of estrogens in adipose tissue. Also, new agents which block or modulate the estrogen receptor have been developed, they are generally summarised as SERMs = selective estrogen receptor modulators. Yet another way to reduce the amount of estrogen available to the tumour is to apply agents which interrupt the feed-back loop in sex hormone regulation (LH-RH analogues) at a higher level.

In general, the side-effects of endocrine treatment are harmless compared to chemotherapy. However, as endocrine treatments eliminate or reduce estrogen as a growth factor for cancer, they work only for tumours which rely on estrogen as a growth factor. The growth of cancers which do not have a functional ER pathway cannot be modulated by endocrine therapies.

The current way to determine if a tumour will respond to endocrine therapies is the analysis of expression of hormone receptors. Hormone receptor status should be tested prior to any endocrine treatment as only a group of patients will benefit from therapy. For this purpose ER (estrogen receptor) and PR (progesterone receptor) status are tested routinely in all patients and they are considered predictive markers of response (a predictive marker or factor is any measurement associated with response or lack of response to a particular therapy). ER status is predictive of response in adjuvant endocrine therapy setting and also in advanced metastatic disease.

Currently, ER positive and or PR positive patients receive TAM and the remaining 10% of patients receive chemotherapy. The problem is that the endocrine treatment is only effective in a subgroup of hormone receptor positive patients and also, that a small subgroup of ER negative patients appear initially to respond to TAM. Then, the non responder subgroup will not only not benefit from endocrine treatment but have the adverse effects of it and will not have the opportunity to receive chemotherapy instead. On the other hand, the ER negative subgroup that could have benefit from endocrine treatment will receive instead chemotherapy. Several different assays are available to measure PR and ER, including biochemical and IHC (immunohistochemical) analysis, but there is a lack of standardisation of staining methods and interlaboratory variability (Clin Cancer Res 2000, 6:616-621).

Currently several predictive markers are under evaluation. As up to now most patients have received Tamoxifen as endocrine treatment most of the markers have been shown to be associated with response or resistance to tamoxifen. However, it is generally assumed that there is a large overlap between responders to one or the other endocrine treatment. In fact, ER and PR expression are used to select patients for any endocrine treatment. Among the markers which have been associated with TAM response is bcl-2. High bcl-2 levels showed promising correlation to TAM therapy response in patients with metastatic disease and prolonged survival and added valuable information to ER negative patient subgroup (J Clin Oncology 1997, 15 5:1916-1922; Endocrine, 2000, 13(1):1-10). There is conflicting evidence regarding the independent predictive value of c-erbB2 (Her2/neu) over expression in patients with advance breast cancer that require further evaluation and verification (British J of Cancer 1999, 79 (7/8):1220-1226; J Natl Cancer Inst, 1998,90 (21): 1601-1608).

Other predictive markers include SRC-1 (steroid receptor coactivator-1), CGA gene over expression, cell kinetics and S phase fraction assays (Breast Cancer Res and Treat, 1998, 48:87-92; Oncogene 2001, 20:6955-6959). Recently, uPA (Urokinase-type plasminogen activator) and PAI-1 (Plasminogen activator inhibitor type 1) together showed to be useful to define a subgroup of patients who have worse prognosis and who would benefit from adjuvant systemic therapy (J Clinical Oncology, 2002, 20 n° 4). All of these markers need further evaluations in prospective trials as none of them is yet a validated marker of response.

The gene stathimin (NM_005563) codes for an oncoprotein 18, also known as stathimin, a conserved cytosolic phosphoprotein that regulates microtubule dynamics. The protein is highly expressed in a variety of human malignancies. In human breast cancers, the stathimin gene has shown to be up-regulated in a subset of the tumours.

The gene PITX-2 (NM_000325) encodes a transcription factor (PITX-2) which is known to be expressed during development of anterior structures such as the eye, teeth, and anterior pituitary. Although the expression of this gene is associated with cell differentiation and proliferation it has no heretofore recognised role in carcinogenesis or responsiveness to endocrine treatment. Furthermore, to date no known analysis of the methylation state of this gene has been published.

The gene PSA (Accession number NM_021154), is not to be confused with the gene also popularly referred to as PSA (Accession number NM_001648) which encodes prostate specific antigen and whose technically correct name is kallikrein 3. The gene PSA encodes the protein phosphoserine aminotransferase which is the second step-catalysing enzyme in the serine biosynthesis pathway. Changes in gene expression levels have been monitored by mRNA expression analysis and upregulation of the gene has been identified in colonic carcinoma in a study of 6 samples (Electrophoresis 2002 Jun;23(11):1667-76 mRNA differential display of gene expression in colonic carcinoma. Ojala P, Sundstrom J, Gronroos JM, Virtanen E, Talvinen K, Nevalainen TJ.).

The gene CGA (Accession number NM_000735) encodes the alpha polypeptide of glycoprotein hormones. Further, it has been identified as an estrogen receptor alpha (ER alpha)-responsive gene and overexpression of the gene has been linked to ER positivity in breast tumours. Bieche *et. al.* examined mRNA levels of said gene in 125 ER alpha-positive

postmenopausal breast cancer patients treated with primary surgery followed by adjuvant tamoxifen therapy. Initial results indicated significant links between CGA gene overexpression and Scarff-Bloom-Richardson histopathological grade I+II and progesterone and estrogen receptor positivity, which suggested that CGA is a marker of low tumour aggressiveness ('Identification of CGA as a Novel Estrogen Receptor-responsive Gene in Breast Cancer: An Outstanding Candidate Marker to predict the Response to Endocrine Therapy Cancer Research' 61, 1652-1658, February 15, 2001. Ivan Bièche, Béatrice Parfait, Vivianne Le Doussal, Martine Olivi, Marie-Christine Rio, Rosette Lidereau and Michel Vidaud). Further mRNA expression analysis linked CGA expression levels to Tamoxifen response, it was postulated that when combined with analysis of the marker ERBB2 (a marker of poor response) the gene may be useful as a predictive marker of tamoxifen responsiveness in breast cancer (Oncogene 2001 Oct 18;20(47):6955-9 The CGA gene as new predictor of the response to endocrine therapy in ER alpha-positive postmenopausal breast cancer patients. Bieche I, Parfait B, Nogues C, Andrieu C, Vidaud D, Spyrtos F, Lidereau R, Vidaud M.). The authors provided significant data associating the expression of the gene CGA with Endocrine treatment response. However, said analyses have all focused upon the analysis of relative levels of mRNA expression. This is not a methodology that is suitable for a medium or high throughput, nor is it a suitable basis for the development of a clinical assay.

Description

The present invention provides methods and nucleic acids for predicting the response of a patient with a cell proliferative disorder of the breast tissues to endocrine treatment. Using the methods and nucleic acids described herein, statistically significant models of patient responsiveness to said treatment regimen can be developed and utilised to assist patients and clinicians in determining treatment options. The described method is to be used to assess the suitability of endocrine treatment as a therapy for patients suffering from a cell proliferative disorder of the breast tissues. Thus, the present invention will be seen to reduce the problems associated with present treatment response prediction methods.

Using the methods and nucleic acids as described herein, patient responsiveness can be evaluated before or during endocrine treatment for a cell proliferative disorder of the breast tissues, in order to provide critical information to the patient and clinician as to the risks, burdens, and benefits associated endocrine treatment. It will be appreciated, therefore, that the

methods and nucleic acids exemplified herein can serve to improve a patient's quality of life and odds of treatment success by allowing both patient and clinician a more accurate assessment of the patient's treatment options.

The aim of the invention is achieved by means of the analysis of the methylation patterns of one or a combination of genes taken from the group PITX 2, PSA, CGA and STMN 1 (see Table 1) and/or their regulatory regions. The invention is characterised in that the nucleic acid of one or a combination of genes taken from the group PITX 2, PSA, CGA and STMN 1 are contacted with a reagent or series of reagents capable of distinguishing between methylated and non methylated CpG dinucleotides within the genomic sequence of interest.

The present invention makes available a method for ascertaining genetic and/or epigenetic parameters of genomic DNA. The method is for use in the improved treatment and monitoring of breast cell proliferative disorders, by enabling the accurate prediction of a patient's response to endocrine treatment. In a particularly preferred embodiment, the method according to the invention enables the differentiation between patients who respond to endocrine therapy and those who do not.

The method according to the invention may be used for the analysis of a wide variety of cell proliferative disorders of the breast tissues including, but not limited to ductal carcinoma *in situ*, lobular carcinoma, colloid carcinoma, tubular carcinoma, medullary carcinoma, metaplastic carcinoma, intraductal carcinoma *in situ*, lobular carcinoma *in situ* and papillary carcinoma *in situ*.

The method according to the invention is particularly suited to the prediction of response to endocrine treatment in two treatment settings. In one embodiment, the method is applied to patients who receive endocrine treatment as secondary treatment to a primary treatment such as surgery (hereinafter referred to as the adjuvant setting) as illustrated in Figure 1. Such a treatment is often prescribed to patients suffering from Stage 1 to 3 breast carcinomas. In this embodiment responders are defined as those who do not have a detectable relapse of the breast cancer in a specified period of time, non responders are those who relapse within said time period. In this embodiment it is preferred that the target nucleic acids are of the gene PITX 2 and/or its regulatory regions. In this embodiment of the method it is preferred that the

method according to the invention is applied only to patients who are estrogen and/or progesterone receptor marker positive.

In a further embodiment said method is applied to patients suffering from a relapse of breast cancer following treatment by a primary means (preferably surgery) followed by a disease free period, and wherein the endocrine treatment has been prescribed in response to a detection of a relapse of the carcinoma. Such a treatment is often prescribed to patients suffering from later stage carcinomas, particularly wherein metastasis has occurred. Therefore this clinical setting shall also hereinafter be referred to as the 'metastatic setting'. In this embodiment it is preferred that the target nucleic acids are derived from one or more of the genes taken from the group PSA, CGA and STMN 1 and/or their regulatory regions. In this embodiment responders are those who enter partial or complete remission i.e. subjects whose cancer recedes to undetectable levels as opposed to those whose diseases further metastasise or remain above detectable levels. This methodology present further improvements over the state of the art in that the method may be applied to any subject, independent of the estrogen and/or progesterone receptor status. Therefore in a preferred embodiment, the subject is not required to have been tested for estrogen or progesterone receptor status. In one embodiment of the method the methodology is applied to subjects who have not received chemotherapy, wherein said genes are selected from the group comprising PSA, CGA, and STMN 1. Furthermore, wherein said patients have been treated with chemotherapy said group of genes need not include the gene STMN 1.

Furthermore, the method enables the analysis of cytosine methylations and single nucleotide polymorphisms within said genes.

The object of the invention is achieved by means of the analysis of the methylation patterns of the genes PITX 2, PSA, CGA, and STMN 1 and/or their regulatory regions, in a particularly preferred embodiment the sequences comprising SEQ ID Nos: 27, 90, 91 and 83 and sequences complementary thereto. In a preferred embodiment said method is achieved by contacting said nucleic acid sequences in a biological sample obtained from a subject with at least one reagent or a series of reagents, wherein said reagent or series of reagents, distinguishes between methylated and non methylated CpG dinucleotides within the target nucleic acid.

In a preferred embodiment, the method comprises the following steps:

In the first step of the method the genomic DNA sample must be isolated from sources such as cells or cellular components which contain DNA, sources of DNA comprising, for example, cell lines, histological slides, biopsies, tissue embedded in paraffin, breast tissues, blood, plasma, lymphatic fluid, lymphatic tissue, duct cells, ductal lavage fluid, nipple aspiration fluid, bone marrow and combinations thereof. Extraction may be by means that are standard to one skilled in the art, these include the use of detergent lysates, sonification and vortexing with glass beads. Once the nucleic acids have been extracted the genomic double stranded DNA is used in the analysis.

In a preferred embodiment the DNA may be cleaved prior to the next step of the method, this may be by any means standard in the state of the art, in particular, but not limited to, with restriction endonucleases.

In the second step of the method, the genomic DNA sample is treated in such a manner that cytosine bases which are unmethylated at the 5'-position are converted to uracil, thymine, or another base which is dissimilar to cytosine in terms of hybridisation behaviour. This will be understood as 'pretreatment' hereinafter.

The above described treatment of genomic DNA is preferably carried out with bisulfite (sulfite, disulfite) and subsequent alkaline hydrolysis which results in a conversion of non-methylated cytosine nucleobases to uracil or to another base which is dissimilar to cytosine in terms of base pairing behaviour. If bisulfite solution is used for the reaction, then an addition takes place at the non-methylated cytosine bases. Moreover, a denaturing reagent or solvent as well as a radical interceptor must be present. A subsequent alkaline hydrolysis then gives rise to the conversion of non-methylated cytosine nucleobases to uracil. The converted DNA is then used for the detection of methylated cytosines.

Fragments of the pretreated DNA are amplified, using sets of primer oligonucleotides, and a preferably heat-stable, polymerase. Because of statistical and practical considerations, preferably more than ten different fragments having a length of 100 - 2000 base pairs are amplified. The amplification of several DNA segments can be carried out simultaneously in one and the same reaction vessel. Usually, the amplification is carried out by means of a polymerase chain reaction (PCR).

The design of such primers is obvious to one skilled in the art. These should include at least two oligonucleotides whose sequences are each reverse complementary or identical to an at least 18 base-pair long segment of the following base sequences specified in the appendix: SEQ ID NO 188, 189, 430, 431, 314-317, 556-559, 300, 301, 542 and 543. Said primer oligonucleotides are preferably characterised in that they do not contain any CpG dinucleotides. In a particularly preferred embodiment of the method, the sequence of said primer oligonucleotides are designed so as to selectively anneal to and amplify, only the breast cell specific DNA of interest, thereby minimising the amplification of background or non relevant DNA. In the context of the present invention, background DNA is taken to mean genomic DNA which does not have a relevant tissue specific methylation pattern, in this case, the relevant tissue being breast tissues.

According to the present invention, it is preferred that at least one primer oligonucleotide is bound to a solid phase during amplification. The different oligonucleotide and/or PNA-oligomer sequences can be arranged on a plane solid phase in the form of a rectangular or hexagonal lattice, the solid phase surface preferably being composed of silicon, glass, polystyrene, aluminium, steel, iron, copper, nickel, silver, or gold, it being possible for other materials such as nitrocellulose or plastics to be used as well.

The fragments obtained by means of the amplification may carry a directly or indirectly detectable label. Preferred are labels in the form of fluorescence labels, radionuclides, or detachable molecule fragments having a typical mass which can be detected in a mass spectrometer, it being preferred that the fragments that are produced have a single positive or negative net charge for better detectability in the mass spectrometer. The detection may be carried out and visualised by means of matrix assisted laser desorption/ionisation mass spectrometry (MALDI) or using electron spray mass spectrometry (ESI).

In the next step the nucleic acid amplicates are analysed in order to determine the methylation status of the genomic DNA prior to treatment.

The post treatment analysis of the nucleic acids may be carried out using alternative methods. Several methods for the methylation status specific analysis of the treated nucleic acids are described below, other alternative methods will be obvious to one skilled in the art.

Using several methods known in the art the analysis may be carried out during the amplification step of the method. In one such embodiment, the methylation status of preselected CpG positions within the genes PITX 2, PSA, CGA, and STMN 1 and/or their regulatory regions may be detected by use of methylation specific primer oligonucleotides. This technique has been described in U.S. Patent 6,265,171 to Herman. The use of methylation status specific primers for the amplification of bisulphite treated DNA allows the differentiation between methylated and unmethylated nucleic acids. MSP primers pairs contain at least one primer which hybridises to a bisulphite treated CpG dinucleotide. Therefore the sequence of said primers comprises at least one CG, TG or CA dinucleotide. MSP primers specific for non methylated DNA contain a 'T' at the 3' position of the C position in the CpG. According to the present invention, it is therefore preferred that the base sequence of said primers is required to comprise a sequence having a length of at least 9 nucleotides which hybridises to a pretreated nucleic acid sequence according to SEQ ID Nos 188, 189, 430, 431, 314-317, 556-559, 300, 301, 542 and 543 and sequences complementary thereto wherein the base sequence of said oligomers comprises at least one CG, TG or CA dinucleotide.

In one embodiment of the method the methylation status of the CpG positions may be determined by means of hybridisation analysis. In this embodiment of the method the amplicates obtained in the second step of the method are hybridised to an array or a set of oligonucleotides and/or PNA probes. In this context, the hybridisation takes place in the manner described as follows. The set of probes used during the hybridisation is preferably composed of at least 4 oligonucleotides or PNA-oligomers. In the process, the amplicates serve as probes which hybridise to oligonucleotides previously bonded to a solid phase. The non-hybridised fragments are subsequently removed. Said oligonucleotides contain at least one base sequence having a length of 10 nucleotides which is reverse complementary or identical to a segment of the base sequences specified in the appendix, the segment containing at least one CpG or TpG dinucleotide. In a further preferred embodiment the cytosine of the CpG dinucleotide, or in the case of TpG, the thiamine, is the 5th to 9th nucleotide from the 5'-end of the 10-mer. One oligonucleotide exists for each CpG or TpG dinucleotide.

The non-hybridised amplicates are then removed. In the final step of the method, the hybridised amplicates are detected. In this context, it is preferred that labels attached to the

amplificates are identifiable at each position of the solid phase at which an oligonucleotide sequence is located.

In a further embodiment of the method the methylation status of the CpG positions may be determined by means of oligonucleotide probes that are hybridised to the treated DNA concurrently with the PCR amplification primers (wherein said primers may either be methylation specific or standard).

A particularly preferred embodiment of this method is the use of fluorescence-based Real Time Quantitative PCR (Heid et al., Genome Res. 6:986-994, 1996) employing a dual-labelled fluorescent oligonucleotide probe (TaqMan™ PCR, using an ABI Prism 7700 Sequence Detection System, Perkin Elmer Applied Biosystems, Foster City, California). The TaqMan™ PCR reaction employs the use of a nonextendible interrogating oligonucleotide, called a TaqMan™ probe, which is designed to hybridise to a GpC-rich sequence located between the forward and reverse amplification primers. The TaqMan™ probe further comprises a fluorescent "reporter moiety" and a "quencher moiety" covalently bound to linker moieties (e.g., phosphoramidites) attached to the nucleotides of the TaqMan™ oligonucleotide. For analysis of methylation within nucleic acids subsequent to bisulphite treatment it is required that the probe be methylation specific, as described in U.S. 6,331,393, (hereby incorporated by reference) also known as the Methyl Light assay. Variations on the TaqMan™ detection methodology that are also suitable for use with the described invention include the use of dual probe technology (Lightcycler™) or fluorescent amplification primers (Sunrise™ technology). Both these techniques may be adapted in a manner suitable for use with bisulphite treated DNA, and moreover for methylation analysis within CpG dinucleotides.

A further suitable method for the use of probe oligonucleotides for the assessment of methylation by analysis of bisulphite treated nucleic acids is the use of blocker oligonucleotides. The use of such oligonucleotides has been described in BioTechniques 23(4), 1997, 714-720 D. Yu, M. Mukai, Q. Liu, C. Steinman. Blocking probe oligonucleotides are hybridised to the bisulphite treated nucleic acid concurrently with the PCR primers. PCR amplification of the nucleic acid is terminated at the 5' position of the blocking probe, thereby amplification of a nucleic acid is suppressed wherein the complementary sequence to the blocking probe is present. The probes may be designed to hybridise to the bisulphite treated

nucleic acid in a methylation status specific manner. For example, for detection of methylated nucleic acids within a population of unmethylated nucleic acids suppression of the amplification of nucleic acids which are unmethylated at the position in question would be carried out by the use of blocking probes comprising a 'CG' at the position in question, as opposed to a 'CA'.

In a further preferred embodiment of the method the determination of the methylation status of the CpG positions is carried out by the use of template directed oligonucleotide extension, such as MS SNUPE as described by Gonzalgo and Jones (Nucleic Acids Res. 25:2529-2531).

In a further embodiment of the method the determination of the methylation status of the CpG positions is enabled by sequencing and subsequent sequence analysis of the amplicate generated in the second step of the method (Sanger F., et al., 1977 PNAS USA 74: 5463-5467).

A further embodiment of the invention is a method for the analysis of the methylation status of genomic DNA without the need for pretreatment. In the first and second steps of the method the genomic DNA sample must be obtained and isolated from tissue or cellular sources. Such sources may include cell lines, histological slides, body fluids, or tissue embedded in paraffin. Extraction may be by means that are standard to one skilled in the art, these include the use of detergent lysates, sonification and vortexing with glass beads. Once the nucleic acids have been extracted the genomic double stranded DNA is used in the analysis.

In a preferred embodiment the DNA may be cleaved prior to the treatment, this may be by any means standard in the state of the art, in particular with restriction endonucleases. In the third step, the DNA is then digested with one or more methylation sensitive restriction enzymes. The digestion is carried out such that hydrolysis of the DNA at the restriction site is informative of the methylation status of a specific CpG dinucleotide.

In a preferred embodiment the restriction fragments are amplified. In a further preferred embodiment this is carried out using the polymerase chain reaction.

In the final step the amplicates are detected. The detection may be by any means standard in the art, for example, but not limited to, gel electrophoresis analysis, hybridisation analysis, incorporation of detectable tags within the PCR products, DNA array analysis, MALDI or ESI analysis.

The aforementioned method is preferably used for ascertaining genetic and/or epigenetic parameters of genomic DNA.

In order to enable this method, the invention further provides the modified DNA of one or a combination of genes taken from the group PITX 2, PSA, CGA, and STMN 1 as well as oligonucleotides and/or PNA-oligomers for detecting cytosine methylations within said genes.

The present invention is based on the discovery that genetic and epigenetic parameters and, in particular, the cytosine methylation patterns of said genomic DNAs are particularly suitable for improved treatment and monitoring of breast cell proliferative disorders.

The nucleic acids according to the present invention can be used for the analysis of genetic and/or epigenetic parameters of genomic DNA.

This objective according to the present invention is achieved using a nucleic acid containing a sequence of at least 18 bases in length of the pretreated genomic DNA according to one of SEQ ID NO 188, 189, 430, 431, 314-317, 556-559, 300, 301, 542, and 543 and sequences complementary thereto.

The modified nucleic acids could heretofore not be connected with the ascertainment of disease relevant genetic and epigenetic parameters.

The object of the present invention is further achieved by an oligonucleotide or oligomer for the analysis of pretreated DNA, for detecting the genomic cytosine methylation state, said oligonucleotide containing at least one base sequence having a length of at least 10 nucleotides which hybridises to a pretreated genomic DNA according to SEQ ID NO 188, 189, 430, 431, 314-317, 556-559, 300, 301, 542, and 543. The oligomer probes according to the present invention constitute important and effective tools which, for the first time, make it possible to ascertain specific genetic and epigenetic parameters during the analysis of biological samples for features associated with a patient's response to endocrine treatment.

Said oligonucleotides allow the improved treatment and monitoring of breast cell proliferative disorders. The base sequence of the oligomers preferably contains at least one CpG or TpG dinucleotide. The probes may also exist in the form of a PNA (peptide nucleic acid) which has particularly preferred pairing properties. Particularly preferred are oligonucleotides according to the present invention in which the cytosine of the CpG dinucleotide is within the middle third of said oligonucleotide e.g. the 5th - 9th nucleotide from the 5'-end of a 13-mer oligonucleotide; or in the case of PNA-oligomers, it is preferred for the cytosine of the CpG dinucleotide to be the 4th - 6th nucleotide from the 5'-end of the 9-mer.

The oligomers according to the present invention are normally used in so called "sets" which contain at least one oligomer for each of the CpG dinucleotides within SEQ ID NO 188, 189, 430, 431, 314-317, 556-559, 300, 301, 542 and 543.

In a particularly preferred embodiment of the method the oligomers according to SEQ ID NOs: 1816, 1816, 1817, 1817, 1818, 1818, 1819, 1819, 1820, 1820, 1821, 1821, 1822, 1822, 1823, 1823 - 1838, 1838, 1839, 1839, 1840, 1840, 1841, 1841, 1842, 1842, 1843, 1843 are used for predicting a subject's response to endocrine treatment in an adjuvant setting. In a further, particularly preferred embodiment of the method the oligomers according to SEQ ID NOs: 1816, 1816, 1817, 1817, 1818, 1818, 1819, 1819, 1820, 1820, 1821, 1821, 1822, 1822, 1823, 1823 to 1837 are used for predicting a subject's response to endocrine treatment in a metastatic setting.

In the case of the sets of oligonucleotides according to the present invention, it is preferred that at least one oligonucleotide is bound to a solid phase. It is further preferred that all the oligonucleotides of one set are bound to a solid phase.

The present invention further relates to a set of at least 10 n (oligonucleotides and/or PNA-oligomers) used for detecting the cytosine methylation state of genomic DNA, by analysis of said sequence or treated versions of said sequence (of the genes PITX 2, PSA, CGA, and STMN 1, as detailed in the sequence listing and Table 1) and sequences complementary thereto). These probes enable improved treatment and monitoring of breast cell proliferative disorders.

The set of oligomers may also be used for detecting single nucleotide polymorphisms (SNPs) by analysis of said sequence or treated versions of said sequence (of the genes PITX 2, PSA, CGA, and STMN 1, as detailed in the sequence listing and Table 1).

It will be obvious to one skilled in the art that the method according to the invention will be improved and supplemented by the incorporation of markers and clinical indicators known in the state of the art and currently used as predictive of the outcome Endocrine treatment. More preferably said markers include node status, age, menopausal status, grade, estrogen and progesterone receptors.

The genes that form the basis of the present invention may also be used to form a "gene panel", i.e. a collection comprising the particular genetic sequences of the present invention and/or their respective informative methylation sites. The formation of gene panels allows for a quick and specific analysis of specific aspects of breast cancer treatment. The gene panel(s) as described and employed in this invention can be used with surprisingly high efficiency for the treatment of breast cell proliferative disorders by prediction of the outcome of treatment with the drug Tamoxifen.

The efficiency of the method according to the invention is improved when applied to patients who have not been treated with chemotherapy. Accordingly, it is a particularly preferred embodiment of the method wherein the method is used for the assessment of subjects who have not undergone chemotherapy.

In addition, the use of multiple CpG sites from a diverse array of genes allows for a relatively high degree of sensitivity and specificity in comparison to single gene prognostic tools.

According to the present invention, it is preferred that an arrangement of different oligonucleotides and/or PNA-oligomers (a so-called "array") made available by the present invention is present in a manner that it is likewise bound to a solid phase. This array of different oligonucleotide- and/or PNA-oligomer sequences can be characterised in that it is arranged on the solid phase in the form of a rectangular or hexagonal lattice. The solid phase surface is preferably composed of silicon, glass, polystyrene, aluminium, steel, iron, copper, nickel, silver, or gold. However, nitrocellulose as well as plastics such as nylon which can exist in the form of pellets or also as resin matrices are suitable alternatives.

Therefore, a further subject matter of the present invention is a method for manufacturing an array fixed to a carrier material for the improved treatment and monitoring of breast cell proliferative disorders. In said method at least one oligomer according to the present invention is coupled to a solid phase. Methods for manufacturing such arrays are known, for example, from US Patent 5,744,305 by means of solid-phase chemistry and photolabile protecting groups.

A further subject matter of the present invention relates to a DNA chip for the improved treatment and monitoring of breast cell proliferative disorders. The DNA chip contains at least one nucleic acid according to the present invention. DNA chips are known, for example, in US Patent 5,837,832.

Moreover, a subject matter of the present invention is a kit which may be composed, for example, of a bisulfite-containing reagent, a set of primer oligonucleotides containing at least two oligonucleotides whose sequences in each case correspond to or are complementary to a 18 base long segment of the base sequences specified in SEQ ID NOs: 188, 189, 430, 431, 314 to 317, 556-559, 300, 301, 542, and 543, oligonucleotides and/or PNA-oligomers as well as instructions for carrying out and evaluating the described method.

In a further preferred embodiment said kit may further comprise standard reagents for performing a CpG position specific methylation analysis wherein said analysis comprises one or more of the following techniques: MS-SNuPE, MSP, Methyl light, Heavy Methyl, and nucleic acid sequencing. However, a kit along the lines of the present invention can also contain only part of the aforementioned components.

The oligomers according to the present invention or arrays thereof as well as a kit according to the present invention are intended to be used for the improved treatment and monitoring of breast cell proliferative disorders. According to the present invention, the method is preferably used for the analysis of important genetic and/or epigenetic parameters within genomic DNA, in particular for use in improved treatment and monitoring of breast cell proliferative disorders.

The methods according to the present invention are used, for improved treatment and monitoring of breast cell proliferative disorder by enabling more informed treatment regimens.

The present invention moreover relates to the diagnosis and/or prognosis of events which are disadvantageous or relevant to patients or individuals in which important genetic and/or epigenetic parameters within genomic DNA, said parameters obtained by means of the present invention may be compared to another set of genetic and/or epigenetic parameters, the differences serving as the basis for the diagnosis and/or prognosis of events which are disadvantageous or relevant to patients or individuals. Examples of such parameters include, but are not limited to the assessment of estrogen and progesterone markers.

In the context of the present invention the term "hybridisation" is to be understood as a bond of an oligonucleotide to a completely complementary sequence along the lines of the Watson-Crick base pairings in the sample DNA, forming a duplex structure.

In the context of the present invention, "genetic parameters" are mutations and polymorphisms of genomic DNA and sequences further required for their regulation. To be designated as mutations are, in particular, insertions, deletions, point mutations, inversions and polymorphisms and, particularly preferred, SNPs (single nucleotide polymorphisms).

In the context of the present invention the term "methylation state" is taken to mean the degree of methylation present in a nucleic acid of interest, this may be expressed in absolute or relative terms i.e. as a percentage or other numerical value or by comparison to another tissue and therein described as hypermethylated, hypomethylated or as having significantly similar or identical methylation status.

In the context of the present invention the term "regulatory region" of a gene is taken to mean nucleotide sequences which affect the expression of a gene. Said regulatory regions may be located within, proximal or distal to said gene. Said regulatory regions include but are not limited to constitutive promoters, tissue-specific promoters, developmental-specific promoters, inducible promoters and the like. Promoter regulatory elements may also include certain enhancer sequence elements that control transcriptional or translational efficiency of the gene.

In the context of the present invention the term "chemotherapy" is taken to mean the use of drugs or chemical substances to treat cancer. This definition excludes radiation therapy (treatment with high energy rays or particles), hormone therapy (treatment with hormones or hormone analogues (synthetic substitutes) and surgical treatment.

In the context of the present invention, "epigenetic parameters" are, in particular, cytosine methylations and further modifications of DNA bases of genomic DNA and sequences further required for their regulation. Further epigenetic parameters include, for example, the acetylation of histones which, cannot be directly analysed using the described method but which, in turn, correlates with the DNA methylation.

In the context of the present invention the term "adjuvant treatment" is taken to mean a therapy of a cancer patient immediately following an initial non chemotherapeutical therapy, e.g. surgery. In the context of the present invention, said adjuvant treatment is performed using Tamoxifen. In general, the purpose of an adjuvant therapy is to provide a significantly smaller risk of recurrences compared without the adjuvant therapy.

In the context of the present invention the term "estrogen and/or progesterone receptor positive" is taken to mean cells that expresses on its surface receptors that are susceptible to the binding of estrogens and/or progesterones.

In the following, the present invention will be explained in greater detail on the basis of the sequences, figures and examples without being limited thereto.

Figure 1 shows a preferred application of the method according to the invention. The X axis shows the tumour(s) mass, wherein the line '3' shows the limit of detectability. The Y-axis shows time. Accordingly said figure illustrates a simplified model of endocrine treatment of an Stage 1-3 breast tumour wherein primary treatment was surgery (at point 1), followed by adjuvant therapy with Tamoxifen. In a first scenario a responder to treatment (4) is shown as remaining below the limit of detectability for the duration of the observation. A non responder to the treatment (5) has a period of disease free survival (2) followed by relapse when the carcinoma mass reaches the level of detectability.

Figure 2 shows another preferred application of the method according to the invention. The X axis shows the tumour(s) mass, wherein the line '3' shows the limit of detectability. The Y-axis shows time. Accordingly said figure illustrates a simplified model of Endocrine treatment of an late stage breast tumour wherein primary treatment was surgery (at point 1), followed by relapse which is treated by Tamoxifen (2). In a first scenario a responder to treatment (4) is shown as remaining below the limit of detectability for the duration of the observation. A non responder to the treatment (5) does not recover from the relapse.

Figures 3 and 4 show a ranked matrix of data obtained according to Example 3 according to CpG methylation differences between the two classes of tissues (responder and non-responder to endocrine treatment in a metastatic setting), using an algorithm. The Figures are shown in greyscale, wherein the most significant CpG positions are at the bottom of the matrix with significance decreasing towards the top. Black indicates total methylation at a given CpG position, white represents no methylation at the particular position, with degrees of methylation represented in grey, from light (low proportion of methylation) to dark (high proportion of methylation). Each row represents one specific CpG position within a gene and each column shows the methylation profile for the different CpGs for one sample. On the left side a CpG and gene identifier is shown this may be cross referenced with the accompanying table (Table 3) in order to ascertain the gene in question and the detection oligomer used. On the right side p values for the individual CpG positions are shown. The p values are the probabilities that the observed distribution occurred by chance in the data set.

SEQ ID Nos: 1 to 121 represent 5' and/or regulatory regions and/or CpG rich regions of the genes according to Table 1. These sequences are derived from Genbank and will be taken to include all minor variations of the sequence material which are currently unforeseen, for example, but not limited to, minor deletions and SNPs.

SEQ ID Nos: 136 to 619 exhibit the pretreated sequence of DNA derived from the genomic sequence according to Table 1. These sequences will be taken to include all minor variations of the sequence material which are currently unforeseen, for example, but not limited to, minor deletions and SNPs.

SEQ ID Nos: 122 to 135 exhibit the sequence of oligomers which are useful for the analysis of CpG positions within genomic DNA according to SEQ ID Nos: 1 to 121 according to Tables 2 and 3.

SEQ ID NO: 856 to SEQ ID NO: 1843 exhibit the sequence of oligomers which are particularly useful for the analysis of pretreated DNA according to SEQ ID NO: 136 to SEQ ID NO: 619.

Examples

In the following examples, multiplex PCR of genes according to Table 1 was carried out on tissue samples from breast cancer patients treated with the drug Tamoxifen. Two sets of tissues were acquired, in the first set patients received Tamoxifen treatment upon detection of a relapse of breast cancer following surgical treatment (hereinafter referred to as the 'metastatic' setting), wherein breast cancer receded to non detectable levels the patient was termed a 'responder', wherein the cancer remained at detectable levels the patient was termed a non-responder. In the second set of samples, patients were treated with Tamoxifen subsequent to surgery and wherein a relapse (detection of breast cancer) occurred the patients were termed 'non-responders', wherein no relapse was detected patients were termed 'responders'. Comparisons of the methylation profiles of responders to the drug to non responders to the drug in both the adjuvant and metastatic settings (See figures 1 and 2) was carried out as follows.

Each sample was treated in the manner described below in Example 1 in order to deduce the methylation status of CpG positions. The CpG methylation information for each sample was collated and then used in an analysis, as detailed in Example 2 (Metastatic setting) and Example 3 (Adjuvant setting).

Example 1

In the first step the genomic DNA was isolated from the cell samples using the Wizzard kit (Promega).

The isolated genomic DNA from the samples are treated using a bisulfite solution (hydrogen sulfite, disulfite). The treatment is such that all non methylated cytosines within the sample

are converted to thiamidine, conversely 5-methylated cytosines within the sample remain unmodified.

The treated nucleic acids were then amplified using multiplex PCRs, amplifying 8 fragments per reaction with Cy5 fluorescently labelled primers. PCR primers used are described in Table 2. PCR conditions were as follows.

Reaction solution:

10 ng bisulfite treated DNA

3,5 mM MgCl₂

400 μ M dNTPs

2 pmol each primer

1 U Hot Star Taq (Qiagen)

Forty cycles were carried out as follows. Denaturation at 95°C for 15 min, followed by annealing at 55°C for 45 sec., primer elongation at 65°C for 2 min. A final elongation at 65°C was carried out for 10 min.

All PCR products from each individual sample were then hybridised to glass slides carrying a pair of immobilised oligonucleotides for each CpG position under analysis. Each of these detection oligonucleotides was designed to hybridise to the bisulphite converted sequence around one CpG site which was either originally unmethylated (TG) or methylated (CG). See Table 2 for further details of all hybridisation oligonucleotides used. Hybridisation conditions were selected to allow the detection of the single nucleotide differences between the TG and CG variants.

5 μ l volume of each multiplex PCR product was diluted in 10 x Ssarc buffer (10 x Ssarc:230 ml 20 x SSC, 180 ml sodium lauroyl sarcosinate solution 20% , dilute to 1000 ml with dH₂O). The reaction mixture was then hybridised to the detection oligonucleotides as follows. Denaturation at 95°C, cooling down to 10°C, hybridisation at 42°C overnight followed by washing with 10 x Ssarc and dH₂O at 42°C.

Fluorescent signals from each hybridised oligonucleotide were detected using genépix scanner and software. Ratios for the two signals (from the CG oligonucleotide and the TG

oligonucleotide used to analyse each CpG position) were calculated based on comparison of intensity of the fluorescent signals.

Example 2: Metastatic setting

The data obtained according to Example 1 is then sorted into a ranked matrix (as shown in Figures 3 and 4) according to CpG methylation differences between the two classes of tissues, using an algorithm. The most significant CpG positions are at the bottom of the matrix with significance decreasing towards the top. Black indicates total methylation at a given CpG position, white represents no methylation at the particular position, with degrees of methylation represented in grey, from light (low proportion of methylation) to dark (high proportion of methylation). Each row represents one specific CpG position within a gene and each column shows the methylation profile for the different CpGs for one sample. On the left side a CpG and gene identifier is shown this may be cross referenced with the accompanying table (Table 2) in order to ascertain the gene in question and the detection oligomer used. On the right side p values for the individual CpG positions are shown. The p values are the probabilities that the observed distribution occurred by chance in the data set.

Figure 3 shows the analysis of the total sample set wherein responders to the drug and compared to non responders, significant differences in methylation between the two classes of tissue were observed in the genes STMN 1 and PSA.

Wherein patients who had received chemotherapy as an additional therapy were excluded from the data set, an additional marker was observed CGA (see Figure 4).

Example 3: Adjuvant setting

Every CpG was put into a Cox proportional hazard model together with the known predictive markers N-stage and tumour size. The best marker was the gene PITX 2.

The Cox model for the best marker (oligonucleotide number 3522:2087) is:

| | coef | Exp(coef) | Se(coef) | z | P |
|--------|-------|-----------|----------|------|---------|
| nStage | 1.677 | 5.35 | 0.5390 | 3.11 | 0.00190 |

| | | | | | |
|-------------|-------|-------|--------|------|---------|
| 3522:2087 | 2.885 | 17.90 | 0.8211 | 3.51 | 0.00044 |
| Tumour Size | 0.120 | 1.13 | 0.0926 | 1.30 | 0.19000 |

This shows that 3522:2087 gives information about survival time independent of nStage. The tumour size has no significant predictive power for expected survival time.

Table 1: Genes amplified according to Example 1.

| No: | Gene: | Primer: | Amplificate Length: |
|-----|------------------------|---|---------------------|
| 1 | ABCB1 (SEQ ID NO: 1) | TAAGTATGTTGAAGAAAGATTATTGT AG (SEQ ID NO: 620) TAAAACTATCCCATAATAACTCCCA AC (SEQ ID NO: 621) | 633 |
| 2 | APOC2 (SEQ ID NO: 2) | ATGAGTAGAAGAGGTGATAT (SEQ ID NO: 622) CCCTAAATCCCTTTCTTACC (SEQ ID NO: 623) | 533 |
| 3 | CACNA1G (SEQ ID NO: 3) | GGGATTTAAGAGAAATTGAGGTA (SEQ ID NO: 624) AAACCCCAAACATCCTTTAT (SEQ ID NO: 625) | 707 |
| 4 | EGR4 (SEQ ID NO: 4) | AGGGGGATTGAGTGTTAAGT (SEQ ID NO: 627) CCCAAACATAAACACAAAAT (SEQ ID NO: 626) | 293 |
| 5 | AR (SEQ ID NO: 5) | GTAGTAGTAGTAGTAAGAGA (SEQ ID NO: 628) ACCCCCTAAATAATTATCCT (SEQ ID NO: 629) | 460 |
| 6 | RB1 (SEQ ID NO: 6) | TTTAAGTTTGT TTTTGT TTTTGGT (SEQ ID NO: 630) TCCTACTCTAAATCCTCCTCAA (SEQ ID NO: 631) | 718 |
| 7 | GPIBB (SEQ ID NO: 7) | GGTGATAGGAGAATAATGTTGG (SEQ ID NO: 632) TCTCCCAACTACAACCAAAC (SEQ ID NO: 633) | 379 |
| 8 | WT1 (SEQ ID NO: 8) | AAAGGGAAATTAAGTGTTGT (SEQ ID NO: 635) TAACTACCCTCAACTTCCC (SEQ ID NO: 634) | 747 |
| 9 | HLA-F (SEQ ID NO: 9) | TTGTTGTTTTTAGGGGTTTTGG (SEQ ID NO: 636) TCCTTCCCATTCTCCAAATATC (SEQ ID NO: 637) | 946 |
| 10 | ELK1 (SEQ ID NO: 10) | AAGTGTTTTAGTTTTTAATGGGTA (SEQ ID NO: 638) CAAACCCAAAACCTCACCTAT (SEQ ID NO: 639) | 966 |
| 11 | ARHI (SEQ ID NO: 12) | GTGAGTTTTTGGGGTGTTTA (SEQ ID NO: 640) | 442 |

| | | | |
|----|---------------------------|---|-----|
| | | TCAATCTTACTTTCACACTACATAA (SEQ ID NO: 641) | |
| 12 | BCL2 (SEQ ID NO: 13) | GTATTTTATGTTAAGGGGGAAA (SEQ ID NO: 642) AAAAACCACAATCCTCCC (SEQ ID NO: 643) | 640 |
| 13 | BRCA1 (SEQ ID NO: 14) | TGGATGGGAATTGTAGTTTT (SEQ ID NO: 644) TTAACCACCCAATCTACCC (SEQ ID NO: 645) | 537 |
| 14 | CALCA (SEQ ID NO: 15) | GTTTTGGAAGTATGAGGGTG (SEQ ID NO: 646) CCAAATTCTAAACCAATTTC (SEQ ID NO: 647) | 614 |
| 15 | CCND2 (SEQ ID NO: 16) | TTTTGGTATGTAGGTTGGATG (SEQ ID NO: 648) CCTAACCTCCTTCCTTTAACT (SEQ ID NO: 649) | 426 |
| 16 | CDH1 (SEQ ID NO: 17) | GAGGTTGGGGTTAGAGGAT (SEQ ID NO: 650) CAAACCTCACAAATACTTTACAATTC (SEQ ID NO: 651) | 478 |
| 17 | CDKN1B (SEQ ID NO: 18) | GTGGGGAGGTAGTTGAAGA (SEQ ID NO: 652) ATACACCCCTAACCCAAAAT (SEQ ID NO: 653) | 478 |
| 18 | CDKN2A (SEQ ID NO: 19) | TTGAAAATTAAGGGTTGAGG (SEQ ID NO: 654) CACCCTCTAATAACCAACCA (SEQ ID NO: 655) | 598 |
| 19 | CDKN2A (SEQ ID NO: 19) | GGGTTGGTTGGTTATTAGA (SEQ ID NO: 656) AACCTCTACCCACCTAAAT (SEQ ID NO: 657) | 256 |
| 20 | CDKN2B (SEQ ID NO: 20) | GGTTGGTTGAAGGAATAGAAAT (SEQ ID NO: 658) CCCACTAAACATACCCTTATTC (SEQ ID NO: 659) | 708 |
| 21 | CD44 (SEQ ID NO: 21) | GAAAGGAGAGGTAAAGGTTG (SEQ ID NO: 660) AACTCACTTAACCTCAATCCC (SEQ ID NO: 661) | 696 |
| 22 | CSPG2 (SEQ ID NO: 22) | GGATAGGAGTTGGGATTAAGAT (SEQ ID NO: 662) AAATCTTTTCAACACCAAAAT (SEQ ID NO: 663) | 414 |
| 23 | DAPK1 (SEQ ID NO: 23) | AACCCTTTCTTCAAATTACAAA (SEQ ID NO: 664) TGATTGGGTTTTAGGGAAATA (SEQ ID NO: 665) | 348 |
| 24 | GGT1 (SEQ ID NO: 24) | GTGAAGGGTGTGAGTTGTTTA (SEQ ID NO: 666) CACAATCAATTTCCCACAA (SEQ ID NO: 667) | 562 |
| 25 | GSTP1 (SEQ ID NO: 25) | ATTTGGGAAAGAGGGAAAG (SEQ ID NO: 668) TAAAAACTCTAAACCCCATCC (SEQ ID | 300 |

| | | | |
|----|----------------------------|---|-----|
| | | NO: 669) | |
| 26 | HIC1 (SEQ ID NO: 26) | TGGGTTGGAGAAGAAGTTTA (SEQ ID NO: 670) TCATATTTCCAAAAACACACC (SEQ ID NO: 671) | 280 |
| 27 | STMN1 (SEQ ID NO: 27) | GAGTTTGTATTTAAGTTGAGTGGTT (SEQ ID NO: 672) AACAAAACAATACCCCTTCTAA (SEQ ID NO: 673) | 334 |
| 28 | STK11 (SEQ ID NO: 28) | TAAAAGAAGGATTTTTGATTGG (SEQ ID NO: 675) CATCTTATTACCTCCCTCCC (SEQ ID NO: 674) | 528 |
| 29 | ING4 (SEQ ID NO: 29) | ATTAGGGATGAGAGGATTTGTA (SEQ ID NO: 676) TCTTCCTAACCATACACACTAACC (SEQ ID NO: 677) | 212 |
| 30 | MGMT (SEQ ID NO: 30) | AAGGTTTTAGGGAAGAGTGTTT (SEQ ID NO: 678) ACCTTTTCCTATCACAAAAATAA (SEQ ID NO: 679) | 636 |
| 31 | MLH1 (SEQ ID NO: 31) | TAAGGGGAGAGGAGGAGTTT (SEQ ID NO: 680) ACCAATTCTCAATCATCTCTTT (SEQ ID NO: 681) | 545 |
| 32 | MYC (SEQ ID NO: 33) | AGAGGGAGTAAAAGAAAATGGT (SEQ ID NO: 682) CCAAATAAACAAAATAACCTCC (SEQ ID NO: 683) | 712 |
| 33 | N33 (SEQ ID NO: 35) | TTTAGATTGAGGTTTTAGGGT (SEQ ID NO: 684) ATCCATTCTACCTCCTTTTTCT (SEQ ID NO: 685) | 497 |
| 34 | PAX6 (SEQ ID NO: 36) | GGAGGGGAGAGGGTTATG (SEQ ID NO: 686) TACTATACACACCCCAAAACAA (SEQ ID NO: 687) | 374 |
| 35 | X51730 PGR (SEQ ID NO: 67) | TTTTGGGAATGGGTGTAT (SEQ ID NO: 746) CTACCCTTAACCTCCATCCTA (SEQ ID NO: 747) | 369 |
| 36 | PTEN (SEQ ID NO: 38) | TTTAGGTAGTTATATTGGGTATGTT (SEQ ID NO: 690) TCAACTCTCAAACCTCCATCA (SEQ ID NO: 691) | 346 |
| 37 | RARB (SEQ ID NO: 39) | TTGTTGGGAGTTTTTAAGTTTT (SEQ ID NO: 692) CAAATTCTCCTTCCAAATAAAT (SEQ ID NO: 693) | 353 |
| 38 | SFN (SEQ ID NO: 40) | GAAGAGAGGAGAGGGAGGTA (SEQ ID NO: 695) CTATCCAACAAACCCAACA (SEQ ID NO: 696) | 489 |

| | | | |
|----|------------------------|--|-----|
| | | NO: 694) | |
| 39 | S100A2 (SEQ ID NO: 41) | GTTTTTAAGTTGGAGAAGAGGA (SEQ ID NO: 696) ACCTATAAATCACAACCCACTC (SEQ ID NO: 697) | 460 |
| 40 | TGFBR2 (SEQ ID NO: 43) | GTAATTTGAAGAAAGTTGAGGG (SEQ ID NO: 698) CCAACAATAACAAAACCTCT (SEQ ID NO: 699) | 296 |
| 41 | TIMP3 (SEQ ID NO: 44) | TGAGAAAATTGTTGTTTGAAGT (SEQ ID NO: 700) CAAAATACCCTAAAAACCACTC (SEQ ID NO: 701) | 306 |
| 42 | VHL (SEQ ID NO: 45) | TGTAAATGAATAAAGTTAATGAGTG (SEQ ID NO: 702) TCCTAAATTCAAATAATCCTCCT (SEQ ID NO: 703) | 362 |
| 43 | CDKN1C (SEQ ID NO: 46) | GGGGAGGTAGATATTTGGATAA (SEQ ID NO: 704) AACTACACCATTTATATTCCCAC (SEQ ID NO: 705) | 300 |
| 44 | CAV1 (SEQ ID NO: 47) | GTTAGTATGTTTGGGGGTAAAT (SEQ ID NO: 707) ATAAATAACACCTTCCACCCTA (SEQ ID NO: 706) | 435 |
| 45 | CDH13 (SEQ ID NO: 48) | TTTGTATTAGGTTGGAAGTGGT (SEQ ID NO: 708) CCCAAATAAATCAACAACAACA (SEQ ID NO: 709) | 286 |
| 46 | NDRG1 (SEQ ID NO: 49) | GGTTTTGGGTTTAGTGGTAAAT (SEQ ID NO: 711) AACTTTCATAACTCACCTTTC (SEQ ID NO: 710) | 416 |
| 47 | PTGS2 (SEQ ID NO: 50) | GATTTTTGGAGAGGAAGTTAAG (SEQ ID NO: 713) AAAATAAAAACCAAACCCATA (SEQ ID NO: 712) | 381 |
| 48 | THBS1 (SEQ ID NO: 51) | TGGGGTTAGTTTAGGATAGG (SEQ ID NO: 714) CTTAAAAACACTAAACTTCTCAA (SEQ ID NO: 715) | 398 |
| 49 | TMEFF2 (SEQ ID NO: 52) | TTGTTTGGGTTAATAAATGGA (SEQ ID NO: 716) CTTCTCTCTTCTCCCCTCTC (SEQ ID NO: 717) | 295 |
| 50 | PLAU (SEQ ID NO: 53) | TATTATAGGAGGATTGAGGAGG (SEQ ID NO: 718) CCCATAAAATCATACCACTTCT (SEQ ID NO: 719) | 499 |
| 51 | TMEFF2 (SEQ ID NO: 54) | TGTTGGTTGTTGTTGTTGTT (SEQ ID NO: 720) CTTTCTACCCATCCCAAAA (SEQ ID NO: 721) | 319 |

| | | | |
|----|----------------------------|--|-----|
| 52 | DNMT1 (SEQ ID NO: 55) | TCCCCATCACACCTAAAA (SEQ ID NO: 722) GGGAGGAGGGGATGTATT (SEQ ID NO: 723) | 210 |
| 53 | ESR1 (SEQ ID NO: 70) | AGGGGGAATTAAATAGAAAGAG (SEQ ID NO: 752) CAATAAAACCATCCCAAATACT (SEQ ID NO: 753) | 662 |
| 54 | APAF1 (SEQ ID NO: 57) | AGATATGTTTGGAGATTTTAGGA (SEQ ID NO: 726) AACTCCCCACCTCTAATTCTAT (SEQ ID NO: 727) | 674 |
| 55 | HOXA5 (SEQ ID NO: 58) | AAACCCCAAACAACCTCTAT (SEQ ID NO: 729) GAAGGGGGAAAGTTATTTAGTTA (SEQ ID NO: 728) | 392 |
| 56 | RASSF1 (SEQ ID NO: 59) | ACCTCTCTACAAATTACAAATTCA (SEQ ID NO: 730) AGTTTGGGTTAGTTTGGGTT (SEQ ID NO: 731) | 347 |
| 57 | BRCA2 (SEQ ID NO: 60) | ACCCACCCAAACCTAACT (SEQ ID NO: 733) GGTTGGTAGAGATAAAAGGGTA (SEQ ID NO: 732) | 388 |
| 58 | CCND1 (SEQ ID NO: 61) | GATTATAGGGGAGTTTGTGTA (SEQ ID NO: 734) CACCTCCAACATCCAAATA (SEQ ID NO: 735) | 404 |
| 59 | EDNRB (SEQ ID NO: 62) | TCAAAACATCCTCTATCTCTCC (SEQ ID NO: 737) ATAATTGGGGGTTGTATGTATT (SEQ ID NO: 736) | 484 |
| 60 | EGFR (SEQ ID NO: 63) | GGGTTTGGTTGTAATATGGATT (SEQ ID NO: 738) CCCAACACTACCCCTCTAA (SEQ ID NO: 739) | 732 |
| 61 | ERBB2 (SEQ ID NO: 64) | GAGGTAGAGGTTGTGGTGAGT (SEQ ID NO: 740) TCCCAACTTCACTTTCTCC (SEQ ID NO: 741) | 528 |
| 62 | FOS (SEQ ID NO: 65) | ATCCTCCACTTTCTACTTCCA (SEQ ID NO: 743) TTTTAGGGTTATAGGGAAAGGT (SEQ ID NO: 742) | 500 |
| 63 | NFKB1 (SEQ ID NO: 66) | TTTGTAGAATGAAAAGTAGAGTGTG (SEQ ID NO: 744) ACCTTAAAAACCCCAACAAT (SEQ ID NO: 745) | 485 |
| 64 | X51730 PGR (SEQ ID NO: 67) | TTTTGGGAATGGGTTGTAT (SEQ ID NO: 746) CTACCCTTAACCTCCATCCTA (SEQ ID NO: 747) | 369 |
| 65 | TP53 (SEQ ID NO: 68) | GAGTAGGTAGTTGTTGGGTTTC (SEQ ID NO: 748) ACCCCTAATTTAACACTTCTCA (SEQ ID NO: 749) | 702 |

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| | | ID NO: 749) | |
| 66 | TP73 (SEQ ID NO: 69) | AGTAAATAGTGGGTGAGTTATGAA (SEQ ID NO: 750) GAAAAACCTCTAAAACTACTCTCC (SEQ ID NO: 751) | 607 |
| 67 | ESR1 (SEQ ID NO: 70) | AGGGGGAATTAAATAGAAAGAG (SEQ ID NO: 752) CAATAAAACCATCCCAAATACT (SEQ ID NO: 753) | 662 |
| 68 | SERPINE1 (SEQ ID NO: 71) | GGGGTATAGAGAGAGTTTGGAT (SEQ ID NO: 754) ACAATTAAACAAACCCCAATAA (SEQ ID NO: 755) | 492 |
| 69 | CALM1 (SEQ ID NO: 72) | AAAAACTCTAACCTTCTCAAA (SEQ ID NO: 757) TATTTTGTAGTTTGGGGTGTTGT (SEQ ID NO: 756) | 414 |
| 70 | CSNK2B (SEQ ID NO: 73) | TACCCCTCACCATTACTCTAAC (SEQ ID NO: 759) TAGTTTGTGTTTATTGGGTGA (SEQ ID NO: 758) | 437 |
| 71 | FGFR1 (SEQ ID NO: 74) | AGGGAGTTAGTGGTGTGGTAT (SEQ ID NO: 760) CCTTTACCCTTCTCAAATCTAA (SEQ ID NO: 761) | 367 |
| 72 | MKI67 (SEQ ID NO: 75) | CCAATACTCTACAACCATCAAA (SEQ ID NO: 763) GGGAAGTTGAAGTAGGAAGAT (SEQ ID NO: 762) | 499 |
| 73 | NPM1 (SEQ ID NO: 76) | AAGGAAGGAGGAAGTAATTTGT (SEQ ID NO: 764) TTACACCAACCCCTAACTAAC (SEQ ID NO: 765) | 454 |
| 74 | MAPK1 (SEQ ID NO: 77) | TTAGATAATTTTAGGATGGGG (SEQ ID NO: 766) TTCTCATTACAAAAACAAAAA (SEQ ID NO: 767) | 743 |
| 75 | SYK (SEQ ID NO: 78) | GTGGGTTTGGGTAGTTATAGA (SEQ ID NO: 768) TAACCTCCTCTCCTTACCAA (SEQ ID NO: 769) | 485 |
| 76 | TK2 (SEQ ID NO: 79) | ATACAACCTCAAATCCTATCCA (SEQ ID NO: 771) AGGGAGAAGGAAGTTATTTGTT (SEQ ID NO: 770) | 485 |
| 77 | HSPB1 (SEQ ID NO: 80) | CCTACCTCTACCACTTCTCAAT (SEQ ID NO: 773) AAGAGGGTTTAGTTTTTATTGG (SEQ ID NO: 772) | 216 |
| 78 | TES (SEQ ID NO: 81) | AGGTTGGGGATTTTAGTTTTT (SEQ ID NO: 774) | 448 |

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| | | ACCTTCTTCACTTTATTTTCCA (SEQ ID NO: 775) | |
| 79 | SDC4 (SEQ ID NO: 82) | CCTAACTACCCTCATTCCTTT (SEQ ID NO: 777) AGTTGGGGAAATTAAGGTTTAG (SEQ ID NO: 776) | 269 |
| 80 | PITX2 (SEQ ID NO: 83) | TCCTCAACTCTACAAACCTAAAA (SEQ ID NO: 779) GTAGGGGAGGGGAAGTAGATGT (SEQ ID NO: 778) | 408 |
| 81 | GPR37 (SEQ ID NO: 84) | ACTTATTTTTCTTTTCCTCTAAAAAC (SEQ ID NO: 781) TATGGTTTGGTGAGGGTATATT (SEQ ID NO: 780) | 489 |
| 82 | FGF1 (SEQ ID NO: 85) | AGTTGTGTTTAATTGGGAAGAG (SEQ ID NO: 782) CTTATCCCATCCACTATACCAT (SEQ ID NO: 783) | 420 |
| 83 | GRIN2D (SEQ ID NO: 86) | ATAGTTTGTGGTTTGGATTTTT (SEQ ID NO: 784) AAAACCTTTCCTAACTTCAAT (SEQ ID NO: 785) | 435 |
| 84 | CTSB (SEQ ID NO: 87) | AAAATTCATCAAATAACCATAA (SEQ ID NO: 787) AAAAAGGAAGGTAGTAGGATTGT (SEQ ID NO: 786) | 450 |
| 85 | CTSD (SEQ ID NO: 88) | ATACAACCCTCCAACCTTCTAC (SEQ ID NO: 789) AAGGGGTTTTTAAGGAAATG (SEQ ID NO: 788) | 498 |
| 86 | PLAUR (SEQ ID NO: 89) | TGGTTAAAATGGAGGGTTTAAT (SEQ ID NO: 790) CCCCAAATTACCTAAATACAAA (SEQ ID NO: 791) | 348 |
| 87 | PSA (SEQ ID NO: 90) | TAAGAGAGAGGAGTTGAGGTTT (SEQ ID NO: 792) CCAAAATTAACCACCTACCTAA (SEQ ID NO: 793) | 478 |
| 88 | CGA (SEQ ID NO: 91) | TAGTGGTATAAGTTTGGAATGTT (SEQ ID NO: 794) TCCACCTACATCTAAACCCTAA (SEQ ID NO: 795) | 364 |
| 89 | CYP2D6 (SEQ ID NO: 92) | TAAGGGTTTGGAGTAGGAAGTA (SEQ ID NO: 796) CACATACAACAAAATTACCCAA (SEQ ID NO: 797) | 403 |
| 90 | CYP3A4 (SEQ ID NO: 93) | TATCACCACCTTCCCATATTTA (SEQ ID NO: 799) GTTTGATGAATGGATTGTATGA (SEQ ID NO: 798) | 484 |
| 91 | TK1 (SEQ ID NO: 94) | ACCTCTACAAACATCTTATTCCA (SEQ ID NO: 799) | 487 |

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| | NO: 94) | ID NO: 801) TTGGGGGAGTTAGGTAGTATAG (SEQ ID NO: 800) | |
| 92 | REBNP (SEQ ID NO: 95) | TTTGGTAGGGTTAAGGTTTSTA (SEQ ID NO: 802) CTTACTCATCCCTCCTACTCC (SEQ ID NO: 803) | 350 |
| 93 | F12 (SEQ ID NO: 96) | TAGGTTTtaggagggtagtttga (SEQ ID NO: 804) CTCTCACAACCCAAAAATACA (SEQ ID NO: 805) | 450 |
| 94 | REN (SEQ ID NO: 97) | ACCTACTCCAAAAATCACA AAA (SEQ ID NO: 807) TATGTGGAAAAGTTAGGGTGTT (SEQ ID NO: 806) | 489 |
| 95 | EBAG9 (SEQ ID NO: 98) | CCAAAACCTATTA ACTCCCA (SEQ ID NO: 809) AATGTTTTAGAGGTTAGGGTTG (SEQ ID NO: 808) | 463 |
| 96 | MSMB (SEQ ID NO: 99) | GTTTTGTAGGATGGTTTGATT (SEQ ID NO: 810) TATATTTACCTTATCCCCACCC (SEQ ID NO: 811) | 324 |
| 97 | X15323 angiotensinogen gene 5' region and exon 1 (SEQ ID NO: 100) | AAACTCTCCCCTACCCTCTAC (SEQ ID NO: 813) GATGGAGTTGTTTTTAGGTTGT (SEQ ID NO: 812) | 374 |
| 98 | ZNF147 (SEQ ID NO: 101) | TTTGTGTAAATAAGATGTGGGA (SEQ ID NO: 814) TAAACCCCTACAAA ACTACCAA (SEQ ID NO: 815) | 484 |
| 99 | EBBP (SEQ ID NO: 102) | GTATTTGTTTTTGGTGAGGGT (SEQ ID NO: 816) ATCATCTTCCTAAACATTCCAA (SEQ ID NO: 817) | 482 |
| 100 | CALR (SEQ ID NO: 103) | TAAATCACAACCATTAAACCAA (SEQ ID NO: 819) ATAAGAGGGGAGGAAGGTTTA (SEQ ID NO: 818) | 490 |
| 101 | BCAR1 (SEQ ID NO: 104) | AATTCTTCCTTCTATCTCCCTC (SEQ ID NO: 821) TTTATTTTGGGAAGGTTGTT (SEQ ID NO: 820) | 499 |
| 102 | COX7A2L (SEQ ID NO: 105) | AATCCTAAAAACCTAACTTTTAAT (SEQ ID NO: 823) GGAGGTGTAAGGAGAATAGAGA (SEQ ID NO: 822) | 398 |
| 103 | AF174646 glandular kallikrein gene, promoter region | CCAATTCATCATTCAACATCTA (SEQ ID NO: 825) ATTTATTTGGGAGGATAGTGG (SEQ ID NO: 824) | 325 |

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| | and partial sequence (SEQ ID NO: 106) | | |
| 104 | KLK3 (SEQ ID NO: 107) | TTGGAGTGTAAGGATTAGGT (SEQ ID NO: 826) AACCCACATAATAACACAACCTCT (SEQ ID NO: 827) | 387 |
| 105 | AKR1B1 (SEQ ID NO: 108) | CAACAAAAACATTCTTCTAACTC (SEQ ID NO: 829) AGGTATTTAATTTTAGGATGGGT (SEQ ID NO: 828) | 446 |
| 106 | TGM4 (SEQ ID NO: 109) | AATCCTAACTTTTAATCACCCA (SEQ ID NO: 831) GAGAGGGTAATGGTTTTAGGTA (SEQ ID NO: 830) | 435 |
| 107 | AR (SEQ ID NO: 110) | AATATAGGGAGGTTTAGGGTTT (SEQ ID NO: 832) TAACCATACATTTCTCATCCAA (SEQ ID NO: 833) | 424 |
| 108 | HSPA1A (SEQ ID NO: 111) | AACCTTTCAAATTCACAATCA (SEQ ID NO: 835) GGATTATTGGAGGGGATAG (SEQ ID NO: 834) | 495 |
| 109 | FKBP4 (SEQ ID NO: 112) | TTTTTAAGTAGGGAAGGGTTT (SEQ ID NO: 836) TCCTTCTAACTACCTACCCCC (SEQ ID NO: 837) | 308 |
| 110 | ESR2 (SEQ ID NO: 113) | AAACCTTCCCAATAACCTCTTA (SEQ ID NO: 839) TAGAGGGGAGTAGTGTTTGAGT (SEQ ID NO: 838) | 471 |
| 111 | IGF1 (SEQ ID NO: 114) | TACCCTTCTCCCAAATAATAA (SEQ ID NO: 841) GTATTAAAGGAATATGGGGGAT (SEQ ID NO: 840) | 402 |
| 112 | VTN (SEQ ID NO: 115) | GTTATTTGGGTTAATGTAGGGA (SEQ ID NO: 842) TCTATCCCCTCAAACCTAAAAA (SEQ ID NO: 843) | 492 |
| 113 | CTSL (SEQ ID NO: 116) | CTACACCCACCCTTAAATAAAA (SEQ ID NO: 845) TTAGTGGATTGAGGAAGTAG (SEQ ID NO: 844) | 328 |
| 114 | TGFB3 (SEQ ID NO: 117) | CCTACTAAAAATCAAAACCCAA (SEQ ID NO: 847) AAGGTGGTGTAAGTGGATAGAG (SEQ ID NO: 846) | 369 |
| 115 | MAPKAPK5 (SEQ ID NO: 118) | AAACCTACCTCCCCAACTAA (SEQ ID NO: 849) ATTTTTGGTTTTAGGGTTGTAA (SEQ ID NO: 848) | 495 |
| 116 | PCAF (SEQ ID NO: 119) | GGATAAATGATTGAGAGGTTGT (SEQ ID NO: 850) | 369 |

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| | | CCTCCCTTAATTCTCCTACC (SEQ ID NO: 851) | |
| 117 | NCOA3 (SEQ ID NO: 120) | AAGGGGGTGTGTTGTTAGATT (SEQ ID NO: 852) CCTAACCCCTACCCTTAATTTT (SEQ ID NO: 853) | 330 |
| 118 | PRKCD (SEQ ID NO: 121) | CTTAACCCATCCCAATCA (SEQ ID NO: 855) GATAGAAGGATTTTAGTTTTATTGTT (SEQ ID NO: 854) | 322 |

Table 2: Hybridisation oligonucleotides according to Example 2.

| No: | Gene | Oligo: |
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| 1 | ELK1 (SEQ ID NO: 10) | GTTTACGCGGAGTTTAGT (SEQ ID NO: 856) |
| 2 | ELK1 (SEQ ID NO: 10) | GTTTATGTGGAGTTTAGT (SEQ ID NO: 857) |
| 3 | ELK1 (SEQ ID NO: 10) | GTAGTATGGCGTGCGATA (SEQ ID NO: 858) |
| 4 | ELK1 (SEQ ID NO: 10) | GTAGTATGGTGTGTGATA (SEQ ID NO: 859) |
| 5 | ELK1 (SEQ ID NO: 10) | TTAATCGGCGTGGAGTAT (SEQ ID NO: 860) |
| 6 | ELK1 (SEQ ID NO: 10) | TTAATTGGTGTGGAGTAT (SEQ ID NO: 861) |
| 7 | GP1BB (SEQ ID NO: 7) | TTTGAGAGCGGGTGGGAG (SEQ ID NO: 862) |
| 8 | GP1BB (SEQ ID NO: 7) | TTTGAGAGTGGGTGGGAG (SEQ ID NO: 863) |
| 9 | GP1BB (SEQ ID NO: 7) | TTGGTTAGGTCGTAGTAT (SEQ ID NO: 864) |
| 10 | GP1BB (SEQ ID NO: 7) | TTGGTTAGGTTGTAGTAT (SEQ ID NO: 865) |
| 11 | GP1BB (SEQ ID NO: 7) | GTGGGAGCGGAAGTTTGA (SEQ ID NO: 866) |
| 12 | GP1BB (SEQ ID NO: 7) | GTGGGAGTGGAAGTTTGA (SEQ ID NO: 867) |
| 13 | GP1BB (SEQ ID NO: 7) | TGTTGGTGAACGTCGTAG (SEQ ID NO: 868) |
| 14 | GP1BB (SEQ ID NO: 7) | TGTTGGTGAATGTTGTAG (SEQ ID NO: 869) |
| 15 | GP1BB (SEQ ID NO: 7) | GGAGTTCGGTCGGGTTTT (SEQ ID NO: 870) |
| 16 | GP1BB (SEQ ID NO: 7) | GGAGTTTGGTTGGGTTTT (SEQ ID NO: 871) |
| 17 | GP1BB (SEQ ID NO: 7) | TAGGTCGATTCGGGTTGA (SEQ ID NO: 872) |
| 18 | GP1BB (SEQ ID NO: 7) | TAGGTTGATTTGGGTTGA (SEQ ID NO: 873) |

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| 19 | WT1 (SEQ ID NO: 8) | TAGTGAGACGAGGTTTTT (SEQ ID NO: 874) |
| 20 | WT1 (SEQ ID NO: 8) | TAGTGAGATGAGGTTTTT (SEQ ID NO: 875) |
| 21 | WT1 (SEQ ID NO: 8) | ATTGAGGGACGTTTCGTTT (SEQ ID NO: 876) |
| 22 | WT1 (SEQ ID NO: 8) | ATTGAGGGATGTTTGTTT (SEQ ID NO: 877) |
| 23 | WT1 (SEQ ID NO: 8) | GTATTCGATTTTGTTTCGGA (SEQ ID NO: 878) |
| 24 | WT1 (SEQ ID NO: 8) | GTATTTGATTTTGTTTGGA (SEQ ID NO: 879) |
| 25 | WT1 (SEQ ID NO: 8) | GTAGGCGGTAATCGTTTT (SEQ ID NO: 880) |
| 26 | WT1 (SEQ ID NO: 8) | GTAGGTGGTAATTGTTTT (SEQ ID NO: 881) |
| 27 | APC (SEQ ID NO: 11) | GGGTTTCGTTTAATCGTAT (SEQ ID NO: 882) |
| 28 | APC (SEQ ID NO: 11) | GGGTTTTGTTTAATTGTAT (SEQ ID NO: 883) |
| 29 | APC (SEQ ID NO: 11) | GGTTCGTATTTAGCGGATT (SEQ ID NO: 884) |
| 30 | APC (SEQ ID NO: 11) | GGTTTGTATTTAGTGGATT (SEQ ID NO: 885) |
| 31 | APC (SEQ ID NO: 11) | TAGTTAATCGGCGGGTTT (SEQ ID NO: 886) |
| 32 | APC (SEQ ID NO: 11) | TAGTTAATTGGTGGGTTT (SEQ ID NO: 887) |
| 33 | APC (SEQ ID NO: 11) | TTTTCGAGTTCGGTAGTAT (SEQ ID NO: 888) |
| 34 | APC (SEQ ID NO: 11) | TTTTTGAGTTTGGTAGTAT (SEQ ID NO: 889) |
| 35 | ARHI (SEQ ID NO: 12) | TTTTCGAGTAGCGTATTTG (SEQ ID NO: 890) |
| 36 | ARHI (SEQ ID NO: 12) | TTTTTGAGTAGTGTATTTG (SEQ ID NO: 891) |
| 37 | ARHI (SEQ ID NO: 12) | ATAAGTGTGCGAGTTTAA (SEQ ID NO: 892) |
| 38 | ARHI (SEQ ID NO: 12) | ATAAGTGTGTGAGTTTAA (SEQ ID NO: 893) |
| 39 | ARHI (SEQ ID NO: 12) | TATAGTTGCGTAGGTAGT (SEQ ID NO: 894) |
| 40 | ARHI (SEQ ID NO: 12) | TATAGTTGTGTAGGTAGT (SEQ ID NO: 895) |
| 41 | BCL2 (SEQ ID NO: 13) | TGTTTCGCGTGATTGAAG (SEQ ID NO: 896) |
| 42 | BCL2 (SEQ ID NO: 13) | TGTTTTGTGTGATTGAAG (SEQ ID NO: 897) |
| 43 | BCL2 (SEQ ID NO: 13) | AGGGTACGATAATCGGGA (SEQ ID NO: 898) |

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| 44 | BCL2 (SEQ ID NO: 13) | AGGGTATGATAATTGGGA (SEQ ID NO: 899) |
| 45 | BCL2 (SEQ ID NO: 13) | GGATTCGGTCGTTAGGAT (SEQ ID NO: 900) |
| 46 | BCL2 (SEQ ID NO: 13) | GGATTTGGTTGTTAGGAT (SEQ ID NO: 901) |
| 47 | BCL2 (SEQ ID NO: 13) | GATTTTCGTCGAGATGTTTA (SEQ ID NO: 902) |
| 48 | BCL2 (SEQ ID NO: 13) | GATTTTGTGAGATGTTTA (SEQ ID NO: 903) |
| 49 | BRCA1 (SEQ ID NO: 14) | ATAAGCGCGTATAGGTTTT (SEQ ID NO: 904) |
| 50 | BRCA1 (SEQ ID NO: 14) | ATAAGTGTGTATAGGTTTT (SEQ ID NO: 905) |
| 51 | BRCA1 (SEQ ID NO: 14) | TTTCGTAACGTATGTTGGA (SEQ ID NO: 906) |
| 52 | BRCA1 (SEQ ID NO: 14) | TTTTGTAATGTATGTTGGA (SEQ ID NO: 907) |
| 53 | BRCA1 (SEQ ID NO: 14) | AATAAGTCGTAATTGGAAG (SEQ ID NO: 908) |
| 54 | BRCA1 (SEQ ID NO: 14) | AATAAGTTGTAATTGGAAG (SEQ ID NO: 909) |
| 55 | BRCA1 (SEQ ID NO: 14) | TTTACGTTATTCGGGGGTA (SEQ ID NO: 910) |
| 56 | BRCA1 (SEQ ID NO: 14) | TTTATGTTATTTGGGGGTA (SEQ ID NO: 911) |
| 57 | CALCA (SEQ ID NO: 15) | TATAGCGGCGGGAATAAG (SEQ ID NO: 912) |
| 58 | CALCA (SEQ ID NO: 15) | TATAGTGGTGGGAATAAG (SEQ ID NO: 913) |
| 59 | CALCA (SEQ ID NO: 15) | TTGTTAGTTCGCGATTTATA (SEQ ID NO: 914) |
| 60 | CALCA (SEQ ID NO: 15) | TTGTTAGTTTGTGATTTATA (SEQ ID NO: 915) |
| 61 | CALCA (SEQ ID NO: 15) | TTTAGGGATCGCGTATAGA (SEQ ID NO: 916) |
| 62 | CALCA (SEQ ID NO: 15) | TTTAGGGATTGTGTATAGA (SEQ ID NO: 917) |
| 63 | CALCA (SEQ ID NO: 15) | AAATTTTTCGTAGACGGTG (SEQ ID NO: 918) |
| 64 | CALCA (SEQ ID NO: 15) | AAATTTTGTAGATGGTG (SEQ ID NO: 919) |
| 65 | CCND2 (SEQ ID NO: 16) | GGATCGCGTTTGAAGTTG (SEQ ID NO: 920) |
| 66 | CCND2 (SEQ ID NO: 16) | GGATTGTGTTTGAAGTTG (SEQ ID NO: 921) |
| 67 | CCND2 (SEQ ID NO: 16) | TTTAAATAACGAGAGGGG (SEQ ID NO: 922) |
| 68 | CCND2 (SEQ ID NO: 16) | TTTAAATAATGAGAGGGG (SEQ ID NO: 923) |

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| 69 | CCND2 (SEQ ID NO: 16) | TATCGTTTTAGAGCGGAGA (SEQ ID NO: 924) |
| 70 | CCND2 (SEQ ID NO: 16) | TATTGTTTTAGAGTGGAGA (SEQ ID NO: 925) |
| 71 | CDH1 (SEQ ID NO: 17) | TTGGGATTCTGAATTTAGT (SEQ ID NO: 926) |
| 72 | CDH1 (SEQ ID NO: 17) | TTGGGATTTGAATTTAGT (SEQ ID NO: 927) |
| 73 | CDH1 (SEQ ID NO: 17) | GAGGGTTATCGCGTTTAT (SEQ ID NO: 928) |
| 74 | CDH1 (SEQ ID NO: 17) | GAGGGTTATTGTGTTTAT (SEQ ID NO: 929) |
| 75 | CDH1 (SEQ ID NO: 17) | TTAATTAGCGGTACGGGG (SEQ ID NO: 930) |
| 76 | CDH1 (SEQ ID NO: 17) | TTAATTAGTGGTATGGGG (SEQ ID NO: 931) |
| 77 | CDH1 (SEQ ID NO: 17) | TTTAGTGGCGTCGGAATT (SEQ ID NO: 932) |
| 78 | CDH1 (SEQ ID NO: 17) | TTTAGTGGTGTGGAATT (SEQ ID NO: 933) |
| 79 | CDKN1B (SEQ ID NO: 18) | GTTATAATTTCTGGGAAAGA (SEQ ID NO: 934) |
| 80 | CDKN1B (SEQ ID NO: 18) | GTTATAATTTTGGGAAAGA (SEQ ID NO: 935) |
| 81 | CDKN1B (SEQ ID NO: 18) | GGACGAGTTTTTATACGTAG (SEQ ID NO: 936) |
| 82 | CDKN1B (SEQ ID NO: 18) | GGATGAGTTTTTATATGTAG (SEQ ID NO: 937) |
| 83 | CDKN1B (SEQ ID NO: 18) | TTTGATTTCTGAGGGGAGT (SEQ ID NO: 938) |
| 84 | CDKN1B (SEQ ID NO: 18) | TTTGATTTTGAGGGGAGT (SEQ ID NO: 939) |
| 85 | CDKN1B (SEQ ID NO: 18) | AAGAGAAACGTTGGAATA (SEQ ID NO: 940) |
| 86 | CDKN1B (SEQ ID NO: 18) | AAGAGAAATGTTGGAATA (SEQ ID NO: 941) |
| 87 | CDKN1B (SEQ ID NO: 18) | TAGTATCGGACGTTAGGAT (SEQ ID NO: 942) |
| 88 | CDKN1B (SEQ ID NO: 18) | TAGTATTGGATGTTAGGAT (SEQ ID NO: 943) |
| 89 | CDKN2A (SEQ ID NO: 19) | TTTTTAGTCGTATAGGTGA (SEQ ID NO: 944) |
| 90 | CDKN2A (SEQ ID NO: 19) | TTTTTAGTTGTATAGGTGA (SEQ ID NO: 945) |
| 91 | CDKN2A (SEQ ID NO: 19) | GTTGTATCGCGGAGGAAG (SEQ ID NO: 946) |
| 92 | CDKN2A (SEQ ID NO: 19) | GTTGTATTGTGGAGGAAG (SEQ ID NO: 947) |
| 93 | CDKN2A (SEQ ID NO: 19) | ATTCGTAAAGTGTTCTGGAG (SEQ ID NO: 948) |

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| 94 | CDKN2A (SEQ ID NO: 19) | ATTTGTTAAGTGTTTGGAG (SEQ ID NO: 949) |
| 95 | CDKN2A (SEQ ID NO: 19) | GAAAGATATCGCGGTTTTT (SEQ ID NO: 950) |
| 96 | CDKN2A (SEQ ID NO: 19) | GAAAGATATTGTGGTTTTT (SEQ ID NO: 951) |
| 97 | CDKN2A (SEQ ID NO: 19) | TTTCGTTAGTATCGGAGG (SEQ ID NO: 952) |
| 98 | CDKN2A (SEQ ID NO: 19) | TTTTGTTAGTATTGGAGG (SEQ ID NO: 953) |
| 99 | CDKN2A (SEQ ID NO: 19) | GGAGTTTTTCGGTTGATTG (SEQ ID NO: 954) |
| 100 | CDKN2A (SEQ ID NO: 19) | GGAGTTTTTGGTTGATTG (SEQ ID NO: 955) |
| 101 | CDKN2A (SEQ ID NO: 19) | GGGCGTTGTTTAACGTAT (SEQ ID NO: 956) |
| 102 | CDKN2A (SEQ ID NO: 19) | GGGTGTTGTTTAATGTAT (SEQ ID NO: 957) |
| 103 | CDKN2A (SEQ ID NO: 19) | AATAGTTACGGTCGGAGG (SEQ ID NO: 958) |
| 104 | CDKN2A (SEQ ID NO: 19) | AATAGTTATGGTTGGAGG (SEQ ID NO: 959) |
| 105 | CDKN2A (SEQ ID NO: 19) | GGTCGGAGGTCGATTAG (SEQ ID NO: 960) |
| 106 | CDKN2A (SEQ ID NO: 19) | GGTTGGAGGTTGATTAG (SEQ ID NO: 961) |
| 107 | CDKN2B (SEQ ID NO: 20) | GGTTTTTCGGCGATTATAG (SEQ ID NO: 962) |
| 108 | CDKN2B (SEQ ID NO: 20) | GGTTTTTTGGTGATTATAG (SEQ ID NO: 963) |
| 109 | CDKN2B (SEQ ID NO: 20) | AAAGTTCGGAGTTAACGAT (SEQ ID NO: 964) |
| 110 | CDKN2B (SEQ ID NO: 20) | AAAGTTTGGAGTTAATGAT (SEQ ID NO: 965) |
| 111 | CDKN2B (SEQ ID NO: 20) | AGTTTACGGTTAACGGTG (SEQ ID NO: 966) |
| 112 | CDKN2B (SEQ ID NO: 20) | AGTTTATGGTTAATGGTG (SEQ ID NO: 967) |
| 113 | CDKN2B (SEQ ID NO: 20) | AATGCGCGAGGAGAATAA (SEQ ID NO: 968) |
| 114 | CDKN2B (SEQ ID NO: 20) | AATGTGTGAGGAGAATAA (SEQ ID NO: 969) |
| 115 | CD44 (SEQ ID NO: 21) | AAGGTTTTACGGTTCGGT (SEQ ID NO: 970) |
| 116 | CD44 (SEQ ID NO: 21) | AAGGTTTTATGGTTTGGT (SEQ ID NO: 971) |
| 117 | CD44 (SEQ ID NO: 21) | GTGGGGTTCGGAGGTATA (SEQ ID NO: 972) |
| 118 | CD44 (SEQ ID NO: 21) | GTGGGGTTTGGAGGTATA (SEQ ID NO: 973) |

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| 119 | CD44 (SEQ ID NO: 21) | GGTATTTTCGCGATATTTTAG (SEQ ID NO: 974) |
| 120 | CD44 (SEQ ID NO: 21) | GGTATTTTGTGATATTTTAG (SEQ ID NO: 975) |
| 121 | CD44 (SEQ ID NO: 21) | GTTTCGTTTCGGATATTATGG (SEQ ID NO: 976) |
| 122 | CD44 (SEQ ID NO: 21) | GTTTGTTTTGGATATTATGG (SEQ ID NO: 977) |
| 123 | CD44 (SEQ ID NO: 21) | TTTGGCGTAGATCGGTGA (SEQ ID NO: 978) |
| 124 | CD44 (SEQ ID NO: 21) | TTTGGTGTAGATTGGTGA (SEQ ID NO: 979) |
| 125 | CSPG2 (SEQ ID NO: 22) | TTGGGTAACGTCGAATTT (SEQ ID NO: 980) |
| 126 | CSPG2 (SEQ ID NO: 22) | TTGGGTAATGTTGAATTT (SEQ ID NO: 981) |
| 127 | CSPG2 (SEQ ID NO: 22) | TAATAAGTCGTTTTTAAGG (SEQ ID NO: 982) |
| 128 | CSPG2 (SEQ ID NO: 22) | TAATAAGTTGTTTTTAAGG (SEQ ID NO: 983) |
| 129 | CSPG2 (SEQ ID NO: 22) | AAAATTCGCGAGTTTAGAAA (SEQ ID NO: 984) |
| 130 | CSPG2 (SEQ ID NO: 22) | AAAATTTGTGAGTTTAGAAA (SEQ ID NO: 985) |
| 131 | DAPK1 (SEQ ID NO: 23) | GAAGGGAGCGTATTTTAT (SEQ ID NO: 986) |
| 132 | DAPK1 (SEQ ID NO: 23) | GAAGGGAGTGTATTTTAT (SEQ ID NO: 987) |
| 133 | DAPK1 (SEQ ID NO: 23) | TGTTTTTCGGAAATTTGT (SEQ ID NO: 988) |
| 134 | DAPK1 (SEQ ID NO: 23) | TGTTTTTTGGAAATTTGT (SEQ ID NO: 989) |
| 135 | DAPK1 (SEQ ID NO: 23) | TTTCGTTTCGAGATGTGTA (SEQ ID NO: 990) |
| 136 | DAPK1 (SEQ ID NO: 23) | TTTTGTTTTGAGATGTGTA (SEQ ID NO: 991) |
| 137 | DAPK1 (SEQ ID NO: 23) | GGAAATACGGTTTTTTCGTT (SEQ ID NO: 992) |
| 138 | DAPK1 (SEQ ID NO: 23) | GGAAATATGGTTTTTTTGTT (SEQ ID NO: 993) |
| 139 | GGT1 (SEQ ID NO: 24) | TATATTATCGGTTTATAGGTT (SEQ ID NO: 994) |
| 140 | GGT1 (SEQ ID NO: 24) | TATATTATTGGTTTATAGGTT (SEQ ID NO: 995) |
| 141 | GGT1 (SEQ ID NO: 24) | GGGATTTTATTCGTAGATTA (SEQ ID NO: 996) |
| 142 | GGT1 (SEQ ID NO: 24) | GGGATTTTATTTGTAGATTA (SEQ ID NO: 997) |
| 143 | GGT1 (SEQ ID NO: 24) | GAGGTTAGACGTTTTTGTA (SEQ ID NO: 998) |

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| 144 | GGT1 (SEQ ID NO: 24) | GAGGTTAGATGTTTTGTA (SEQ ID NO: 999) |
| 145 | GGT1 (SEQ ID NO: 24) | TAGATATCGTTTTTTGTGG (SEQ ID NO: 1000) |
| 146 | GGT1 (SEQ ID NO: 24) | TAGATATTGTTTTTTGTGG (SEQ ID NO: 1001) |
| 147 | GSTP1 (SEQ ID NO: 25) | GGTTTTTTCGGTTAGTTG (SEQ ID NO: 1002) |
| 148 | GSTP1 (SEQ ID NO: 25) | GGTTTTTTTGGTTAGTTG (SEQ ID NO: 1003) |
| 149 | GSTP1 (SEQ ID NO: 25) | TTTtagggCGTTTTTTTG (SEQ ID NO: 1004) |
| 150 | GSTP1 (SEQ ID NO: 25) | TTTtagggTGTTTTTTTG (SEQ ID NO: 1005) |
| 151 | GSTP1 (SEQ ID NO: 25) | AGTTCGCGGGATTTTTTA (SEQ ID NO: 1006) |
| 152 | GSTP1 (SEQ ID NO: 25) | AGTTTGTGGGATTTTTTA (SEQ ID NO: 1007) |
| 153 | GSTP1 (SEQ ID NO: 25) | TAGTTTTCGTTATTAGTGAG (SEQ ID NO: 1008) |
| 154 | GSTP1 (SEQ ID NO: 25) | TAGTTTTTGTTATTAGTGAG (SEQ ID NO: 1009) |
| 155 | HIC1 (SEQ ID NO: 26) | GAAGTTTACGCGGGATTT (SEQ ID NO: 1010) |
| 156 | HIC1 (SEQ ID NO: 26) | GAAGTTTATGTGGGATTT (SEQ ID NO: 1011) |
| 157 | HIC1 (SEQ ID NO: 26) | TAAACGGCGTATAGGGG (SEQ ID NO: 1012) |
| 158 | HIC1 (SEQ ID NO: 26) | TAAATGGTGTATAGGGG (SEQ ID NO: 1013) |
| 159 | HIC1 (SEQ ID NO: 26) | TTTtagTCGTTTTGATGAT (SEQ ID NO: 1014) |
| 160 | HIC1 (SEQ ID NO: 26) | TTTtagTTGTTTTGATGAT (SEQ ID NO: 1015) |
| 161 | HIC1 (SEQ ID NO: 26) | TAGGAGATTCGAAAGTTTA (SEQ ID NO: 1016) |
| 162 | HIC1 (SEQ ID NO: 26) | TAGGAGATTGAAAGTTTA (SEQ ID NO: 1017) |
| 163 | STMN1 (SEQ ID NO: 27) | GTTATCGGTTTCGGGAATT (SEQ ID NO: 1816) |
| 164 | STMN1 (SEQ ID NO: 27) | GTTATTGGTTTGGAATT (SEQ ID NO: 1817) |
| 165 | STMN1 (SEQ ID NO: 27) | GTAAGAACGTATATAGTGAG (SEQ ID NO: 1818) |
| 166 | STMN1 (SEQ ID NO: 27) | GTAAGAATGTATATAGTGAG (SEQ ID NO: 1819) |
| 167 | STMN1 (SEQ ID NO: 27) | AGAAATTACGATGATGTTAT (SEQ ID NO: 1820) |
| 168 | STMN1 (SEQ ID NO: 27) | AGAAATTATGATGATGTTAT (SEQ ID NO: 1821) |

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| 169 | STMN1 (SEQ ID NO: 27) | ATGGGTGATACGTCGGTG (SEQ ID NO: 1822) |
| 170 | STMN1 (SEQ ID NO: 27) | ATGGGTGATATGTTGGTG (SEQ ID NO: 1823) |
| 171 | STK11 (SEQ ID NO: 28) | GGGTTAAGCGTCGATTAAT (SEQ ID NO: 1018) |
| 172 | STK11 (SEQ ID NO: 28) | GGGTTAAGTGTTGATTAAT (SEQ ID NO: 1019) |
| 173 | STK11 (SEQ ID NO: 28) | AGGGAGGTCGTTGGTATT (SEQ ID NO: 1020) |
| 174 | STK11 (SEQ ID NO: 28) | AGGGAGGTTGTTGGTATT (SEQ ID NO: 1021) |
| 175 | STK11 (SEQ ID NO: 28) | GGTATTCGTGATTTACGATT (SEQ ID NO: 1022) |
| 176 | STK11 (SEQ ID NO: 28) | GGTATTTGTGATTTATGATT (SEQ ID NO: 1023) |
| 177 | STK11 (SEQ ID NO: 28) | TTTCGAGTTTTATCGAGGT (SEQ ID NO: 1024) |
| 178 | STK11 (SEQ ID NO: 28) | TTTTGAGTTTTATTGAGGT (SEQ ID NO: 1025) |
| 179 | STK11 (SEQ ID NO: 28) | ATTAATGAGCGCGTTGTAT (SEQ ID NO: 1026) |
| 180 | STK11 (SEQ ID NO: 28) | ATTAATGAGTGTGTTGTAT (SEQ ID NO: 1027) |
| 181 | ING4 (SEQ ID NO: 29) | TAGTGACGAGAAGGTTAT (SEQ ID NO: 1028) |
| 182 | ING4 (SEQ ID NO: 29) | TAGTGATGAGAAGGTTAT (SEQ ID NO: 1029) |
| 183 | ING4 (SEQ ID NO: 29) | AATTATGAAGCGGTTTTG (SEQ ID NO: 1030) |
| 184 | ING4 (SEQ ID NO: 29) | AATTATGAAGTGGTTTTG (SEQ ID NO: 1031) |
| 185 | ING4 (SEQ ID NO: 29) | TTAGAGACGTGTTTTGAA (SEQ ID NO: 1032) |
| 186 | ING4 (SEQ ID NO: 29) | TTAGAGATGTGTTTTGAA (SEQ ID NO: 1033) |
| 187 | MGMT (SEQ ID NO: 30) | TTAGGTTATCGGTGATTG (SEQ ID NO: 1034) |
| 188 | MGMT (SEQ ID NO: 30) | TTAGGTTATTGGTGATTG (SEQ ID NO: 1035) |
| 189 | MGMT (SEQ ID NO: 30) | TTTGGACGGTATCGTTTAT (SEQ ID NO: 1036) |
| 190 | MGMT (SEQ ID NO: 30) | TTTGGATGGTATTGTTTAT (SEQ ID NO: 1037) |
| 191 | MGMT (SEQ ID NO: 30) | TAGTCGTTTCGAGTAGGAT (SEQ ID NO: 1038) |
| 192 | MGMT (SEQ ID NO: 30) | TAGTTGTTTTGAGTAGGAT (SEQ ID NO: 1039) |
| 193 | MGMT (SEQ ID NO: 30) | AGTAGGATCGGGATTTTT (SEQ ID NO: 1040) |

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| 194 | MGMT (SEQ ID NO: 30) | AGTAGGATTGGGATTTTT (SEQ ID NO: 1041) |
| 195 | MGMT (SEQ ID NO: 30) | TTATTCGGGTACGTGGTA (SEQ ID NO: 1042) |
| 196 | MGMT (SEQ ID NO: 30) | TTATTTGGGTATGTGGTA (SEQ ID NO: 1043) |
| 197 | MLH1 (SEQ ID NO: 31) | ATAAGTTCGGTTTCGGTAT (SEQ ID NO: 1044) |
| 198 | MLH1 (SEQ ID NO: 31) | ATAAGTTTGGTTTTGGTAT (SEQ ID NO: 1045) |
| 199 | MLH1 (SEQ ID NO: 31) | AAGAGCGGATAGCGATTT (SEQ ID NO: 1046) |
| 200 | MLH1 (SEQ ID NO: 31) | AAGAGTGGATAGTGATTT (SEQ ID NO: 1047) |
| 201 | MLH1 (SEQ ID NO: 31) | GAACGTGAGTACGAGGTA (SEQ ID NO: 1048) |
| 202 | MLH1 (SEQ ID NO: 31) | GAATGTGAGTATGAGGTA (SEQ ID NO: 1049) |
| 203 | MLH1 (SEQ ID NO: 31) | TAAAATGTCGTTTCGTGGT (SEQ ID NO: 1050) |
| 204 | MLH1 (SEQ ID NO: 31) | TAAAATGTTGTTTGTGGT (SEQ ID NO: 1051) |
| 205 | CA9 (SEQ ID NO: 32) | TATGGTTTTCGATAATTTTT (SEQ ID NO: 1052) |
| 206 | CA9 (SEQ ID NO: 32) | TATGGTTTTCGATAATTTTT (SEQ ID NO: 1053) |
| 207 | CA9 (SEQ ID NO: 32) | ATATATCGTGTGTTGGGA (SEQ ID NO: 1054) |
| 208 | CA9 (SEQ ID NO: 32) | ATATATTGTGTGTTGGGA (SEQ ID NO: 1055) |
| 209 | CA9 (SEQ ID NO: 32) | ATAGTTAGTCGTATGGTTT (SEQ ID NO: 1056) |
| 210 | CA9 (SEQ ID NO: 32) | ATAGTTAGTTGTATGGTTT (SEQ ID NO: 1057) |
| 211 | MYC (SEQ ID NO: 33) | GGGATCGCGTTGAGTATA (SEQ ID NO: 1058) |
| 212 | MYC (SEQ ID NO: 33) | GGGATTGTGTTGAGTATA (SEQ ID NO: 1059) |
| 213 | MYC (SEQ ID NO: 33) | GAGATTCGGAGCGAATAG (SEQ ID NO: 1060) |
| 214 | MYC (SEQ ID NO: 33) | GAGATTTGGAGTGAATAG (SEQ ID NO: 1061) |
| 215 | MYC (SEQ ID NO: 33) | AGTTAGCGGTTTCGTAATTT (SEQ ID NO: 1062) |
| 216 | MYC (SEQ ID NO: 33) | AGTTAGTGGTTTGTAATTT (SEQ ID NO: 1063) |
| 217 | MYC (SEQ ID NO: 33) | GAGTAAGGACGCGATTTT (SEQ ID NO: 1064) |
| 218 | MYC (SEQ ID NO: 33) | GAGTAAGGATGTGATTTT (SEQ ID NO: 1065) |

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| 219 | N33 (SEQ ID NO: 35) | TTGGTTCGGGAAAGGTAA (SEQ ID NO: 1066) |
| 220 | N33 (SEQ ID NO: 35) | TTGGTTTGGGAAAGGTAA (SEQ ID NO: 1067) |
| 221 | N33 (SEQ ID NO: 35) | TTTTCGGTGAATCGGATG (SEQ ID NO: 1068) |
| 222 | N33 (SEQ ID NO: 35) | TTTTTGGTGAATTGGATG (SEQ ID NO: 1069) |
| 223 | N33 (SEQ ID NO: 35) | TGTTATTTCGGAGGGTTT (SEQ ID NO: 1070) |
| 224 | N33 (SEQ ID NO: 35) | TGTTATTTTGGAGGGTTT (SEQ ID NO: 1071) |
| 225 | N33 (SEQ ID NO: 35) | GTTTAGTTAGCGGGTTTT (SEQ ID NO: 1072) |
| 226 | N33 (SEQ ID NO: 35) | GTTTAGTTAGTGGGTTTT (SEQ ID NO: 1073) |
| 227 | N33 (SEQ ID NO: 35) | TTTTTTACGTCGTAGGTAAG (SEQ ID NO: 1074) |
| 228 | N33 (SEQ ID NO: 35) | TTTTTTATGTTGTAGGTAAG (SEQ ID NO: 1075) |
| 229 | N33 (SEQ ID NO: 35) | ATTTAGTTCGGGGGAGGA (SEQ ID NO: 1076) |
| 230 | N33 (SEQ ID NO: 35) | ATTTAGTTTGGGGGAGGA (SEQ ID NO: 1077) |
| 231 | PAX6 (SEQ ID NO: 36) | GAGGGTTATGCGATTTTA (SEQ ID NO: 1078) |
| 232 | PAX6 (SEQ ID NO: 36) | GAGGGTTATGTGATTTTA (SEQ ID NO: 1079) |
| 233 | PAX6 (SEQ ID NO: 36) | TATTGTTTCGGTTGTTAG (SEQ ID NO: 1080) |
| 234 | PAX6 (SEQ ID NO: 36) | TATTGTTTGGTTGTTAG (SEQ ID NO: 1081) |
| 235 | PAX6 (SEQ ID NO: 36) | TTAGTAGCGAGTTTAGGT (SEQ ID NO: 1082) |
| 236 | PAX6 (SEQ ID NO: 36) | TTAGTAGTGAGTTTAGGT (SEQ ID NO: 1083) |
| 237 | PAX6 (SEQ ID NO: 36) | GTTTAGGTCGCGTAGATTT (SEQ ID NO: 1084) |
| 238 | PAX6 (SEQ ID NO: 36) | GTTTAGGTTGTGTAGATTT (SEQ ID NO: 1085) |
| 239 | PAX6 (SEQ ID NO: 36) | AGTTTAGCGTATTTTTCGGT (SEQ ID NO: 1086) |
| 240 | PAX6 (SEQ ID NO: 36) | AGTTTAGTGTATTTTGGT (SEQ ID NO: 1087) |
| 241 | X51730 PGR (SEQ ID NO: 67) | TGTATCGAGAGGTTGATT (SEQ ID NO: 1088) |
| 242 | X51730 PGR (SEQ ID NO: 67) | TGTATTGAGAGGTTTGATT (SEQ ID NO: 1089) |
| 243 | X51730 PGR (SEQ ID NO: 67) | AGGAGTCGCGTGTTATTA (SEQ ID NO: 1090) |

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| 244 | X51730 PGR (SEQ ID NO: 67) | AGGAGTTGTGTGTTATTA (SEQ ID NO: 1091) |
| 245 | X51730 PGR (SEQ ID NO: 67) | GTTAGGAGACGAGATTTT (SEQ ID NO: 1092) |
| 246 | X51730 PGR (SEQ ID NO: 67) | GTTAGGAGATGAGATTTT (SEQ ID NO: 1093) |
| 247 | X51730 PGR (SEQ ID NO: 67) | TGTCGTTTCGTTGGGATAA (SEQ ID NO: 1094) |
| 248 | X51730 PGR (SEQ ID NO: 67) | TGTTGTTTGTGTTGGGATAA (SEQ ID NO: 1095) |
| 249 | PTEN (SEQ ID NO: 38) | TTTGCGTTTCGTATTTAGAG (SEQ ID NO: 1096) |
| 250 | PTEN (SEQ ID NO: 38) | TTTGTGTTTGTATTTAGAG (SEQ ID NO: 1097) |
| 251 | PTEN (SEQ ID NO: 38) | TTAGAGTTATCGTTTGTGTT (SEQ ID NO: 1098) |
| 252 | PTEN (SEQ ID NO: 38) | TTAGAGTTATTGTTTGTGTT (SEQ ID NO: 1099) |
| 253 | PTEN (SEQ ID NO: 38) | TGATGTGGCGGGATTTTT (SEQ ID NO: 1100) |
| 254 | PTEN (SEQ ID NO: 38) | TGATGTGGTGGGATTTTT (SEQ ID NO: 1101) |
| 255 | PTEN (SEQ ID NO: 38) | TTTTTTCGGAAGTTGTAG (SEQ ID NO: 1102) |
| 256 | PTEN (SEQ ID NO: 38) | TTTTTTTGAAGTTGTAG (SEQ ID NO: 1103) |
| 257 | RARB (SEQ ID NO: 39) | TAGTAGTTCGGGTAGGGT (SEQ ID NO: 1104) |
| 258 | RARB (SEQ ID NO: 39) | TAGTAGTTTGGGTAGGGT (SEQ ID NO: 1105) |
| 259 | RARB (SEQ ID NO: 39) | AGGGTTTATCGAAAGTTT (SEQ ID NO: 1106) |
| 260 | RARB (SEQ ID NO: 39) | AGGGTTTATTGAAAGTTT (SEQ ID NO: 1107) |
| 261 | RARB (SEQ ID NO: 39) | GAGCGATTTCGAGTAGGGT (SEQ ID NO: 1108) |
| 262 | RARB (SEQ ID NO: 39) | GAGTGATTTGAGTAGGGT (SEQ ID NO: 1109) |
| 263 | RARB (SEQ ID NO: 39) | GTATCGTCGGGGTAGGAT (SEQ ID NO: 1110) |
| 264 | RARB (SEQ ID NO: 39) | GTATTGTTGGGGTAGGAT (SEQ ID NO: 1111) |
| 265 | RARB (SEQ ID NO: 39) | GAACGTATTCGGAAGGTT (SEQ ID NO: 1112) |
| 266 | RARB (SEQ ID NO: 39) | GAATGTATTTGGAAGGTT (SEQ ID NO: 1113) |
| 267 | SFN (SEQ ID NO: 40) | GAGTAGGTCGAACGTTAT (SEQ ID NO: 1114) |
| 268 | SFN (SEQ ID NO: 40) | GAGTAGGTTGAATGTTAT (SEQ ID NO: 1115) |

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| 269 | SFN (SEQ ID NO: 40) | TTTGCGAAGAGCGAAATT (SEQ ID NO: 1116) |
| 270 | SFN (SEQ ID NO: 40) | TTTGTGAAGAGTGAAATT (SEQ ID NO: 1117) |
| 271 | SFN (SEQ ID NO: 40) | TAACGAGGAGGGTTCGGA (SEQ ID NO: 1118) |
| 272 | SFN (SEQ ID NO: 40) | TAATGAGGAGGGTTTGGA (SEQ ID NO: 1119) |
| 273 | SFN (SEQ ID NO: 40) | GTTCGAGGTGCGTGAGTA (SEQ ID NO: 1120) |
| 274 | SFN (SEQ ID NO: 40) | GTTTGAGGTGTGTGAGTA (SEQ ID NO: 1121) |
| 275 | S100A2 (SEQ ID NO: 41) | TTTAATTGCGGTTGTGTG (SEQ ID NO: 1122) |
| 276 | S100A2 (SEQ ID NO: 41) | TTTAATTGTGGTTGTGTG (SEQ ID NO: 1123) |
| 277 | S100A2 (SEQ ID NO: 41) | TATATAGGCGTATGTATG (SEQ ID NO: 1124) |
| 278 | S100A2 (SEQ ID NO: 41) | TATATAGGTGTATGTATG (SEQ ID NO: 1125) |
| 279 | S100A2 (SEQ ID NO: 41) | TATGTATACGAGTATTGGAT (SEQ ID NO: 1126) |
| 280 | S100A2 (SEQ ID NO: 41) | TATGTATATGAGTATTGGAT (SEQ ID NO: 1127) |
| 281 | S100A2 (SEQ ID NO: 41) | AGTTTTAGCGTGTGTTTA (SEQ ID NO: 1128) |
| 282 | S100A2 (SEQ ID NO: 41) | AGTTTTAGTGTGTGTTTA (SEQ ID NO: 1129) |
| 283 | TFF1 (SEQ ID NO: 42) | TATTTTGGTTCGAGGTTTA (SEQ ID NO: 1130) |
| 284 | TFF1 (SEQ ID NO: 42) | TATTTTGGTTGAGGTTTA (SEQ ID NO: 1131) |
| 285 | TFF1 (SEQ ID NO: 42) | AGATAGAGACGTGTATAGT (SEQ ID NO: 1132) |
| 286 | TFF1 (SEQ ID NO: 42) | AGATAGAGATGTGTATAGT (SEQ ID NO: 1133) |
| 287 | TFF1 (SEQ ID NO: 42) | TGGTTTTTTCGTGAAAGAT (SEQ ID NO: 1134) |
| 288 | TFF1 (SEQ ID NO: 42) | TGGTTTTTTTGTGAAAGAT (SEQ ID NO: 1135) |
| 289 | TFF1 (SEQ ID NO: 42) | AATATTATCGACGTTTTTT (SEQ ID NO: 1136) |
| 290 | TFF1 (SEQ ID NO: 42) | ATTATTGATGTTTTTTTAGAA (SEQ ID NO: 1137) |
| 291 | TGFBR2 (SEQ ID NO: 43) | GAAAACGTGGACGTTTTT (SEQ ID NO: 1138) |
| 292 | TGFBR2 (SEQ ID NO: 43) | GAAAATGTGGATGTTTTT (SEQ ID NO: 1139) |
| 293 | TGFBR2 (SEQ ID NO: 43) | ATTTGGAGCGAGGAATTT (SEQ ID NO: 1140) |

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| 294 | TGFBR2 (SEQ ID NO: 43) | ATTTGGAGTGAGGAATTT (SEQ ID NO: 1141) |
| 295 | TGFBR2 (SEQ ID NO: 43) | AGTTGAAAGTCGGTTAAA (SEQ ID NO: 1142) |
| 296 | TGFBR2 (SEQ ID NO: 43) | AGTTGAAAGTTGGTTAAA (SEQ ID NO: 1143) |
| 297 | TGFBR2 (SEQ ID NO: 43) | AAAGTTTTTCGGAGGGGTT (SEQ ID NO: 1144) |
| 298 | TGFBR2 (SEQ ID NO: 43) | AAAGTTTTTTGGAGGGGTT (SEQ ID NO: 1145) |
| 299 | TGFBR2 (SEQ ID NO: 43) | GGTAGTTACGAGAGAGTT (SEQ ID NO: 1146) |
| 300 | TGFBR2 (SEQ ID NO: 43) | GGTAGTTATGAGAGAGTT (SEQ ID NO: 1147) |
| 301 | TIMP3 (SEQ ID NO: 44) | GTTTTTCGTTGGAGAAAA (SEQ ID NO: 1148) |
| 302 | TIMP3 (SEQ ID NO: 44) | GTTTTTTGTTGGAGAAAA (SEQ ID NO: 1149) |
| 303 | TIMP3 (SEQ ID NO: 44) | GAAAATATCGGTATTTTGG (SEQ ID NO: 1150) |
| 304 | TIMP3 (SEQ ID NO: 44) | GAAAATATTGGTATTTTGG (SEQ ID NO: 1151) |
| 305 | TIMP3 (SEQ ID NO: 44) | ATGTGGGGCGCGGGGATA (SEQ ID NO: 1152) |
| 306 | TIMP3 (SEQ ID NO: 44) | ATGTGGGGGTGTGGGGATA (SEQ ID NO: 1153) |
| 307 | TIMP3 (SEQ ID NO: 44) | GGGATAAGCGAATTTTTTA (SEQ ID NO: 1154) |
| 308 | TIMP3 (SEQ ID NO: 44) | GGGATAAGTGAATTTTTTA (SEQ ID NO: 1155) |
| 309 | VHL (SEQ ID NO: 45) | TATAAGCGTGATGATTGG (SEQ ID NO: 1156) |
| 310 | VHL (SEQ ID NO: 45) | TATAAGTGTGATGATTGG (SEQ ID NO: 1157) |
| 311 | VHL (SEQ ID NO: 45) | TTTCGTGTGAGATGCGTTA (SEQ ID NO: 1158) |
| 312 | VHL (SEQ ID NO: 45) | TTTTGTGTGAGATGTGTTA (SEQ ID NO: 1159) |
| 313 | VHL (SEQ ID NO: 45) | GAGATGCGTTATTTTCGAA (SEQ ID NO: 1160) |
| 314 | VHL (SEQ ID NO: 45) | GAGATGTGTTATTTTGA (SEQ ID NO: 1161) |
| 315 | VHL (SEQ ID NO: 45) | TATTGCGCGTTTGATATGA (SEQ ID NO: 1162) |
| 316 | VHL (SEQ ID NO: 45) | TATTGTGTGTTTGATATGA (SEQ ID NO: 1163) |
| 317 | CDKN1C (SEQ ID NO: 46) | ATGAAGAACGGTTAAGGG (SEQ ID NO: 1164) |
| 318 | CDKN1C (SEQ ID NO: 46) | ATGAAGAATGGTTAAGGG (SEQ ID NO: 1165) |

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| 319 | CDKN1C (SEQ ID NO: 46) | TATTTTCGAGTTAGGTCGAA (SEQ ID NO: 1166) |
| 320 | CDKN1C (SEQ ID NO: 46) | TATTTTGAGTTAGGTTGAA (SEQ ID NO: 1167) |
| 321 | CDKN1C (SEQ ID NO: 46) | AATTAGTCGGGGTCGTGA (SEQ ID NO: 1168) |
| 322 | CDKN1C (SEQ ID NO: 46) | AATTAGTTGGGGTTGTGA (SEQ ID NO: 1169) |
| 323 | CDKN1C (SEQ ID NO: 46) | TTAGTGTTTCGTTTGAAT (SEQ ID NO: 1170) |
| 324 | CDKN1C (SEQ ID NO: 46) | TTAGTGTTTGTGTTGAAT (SEQ ID NO: 1171) |
| 325 | CAV1 (SEQ ID NO: 47) | TAAATATTTTCGATTGTTGAT (SEQ ID NO: 1172) |
| 326 | CAV1 (SEQ ID NO: 47) | TTTAAATATTTTGATTGTTG (SEQ ID NO: 1173) |
| 327 | CAV1 (SEQ ID NO: 47) | TTGGTATCGTTGAAGAAT (SEQ ID NO: 1174) |
| 328 | CAV1 (SEQ ID NO: 47) | TTGGTATTGTTGAAGAAT (SEQ ID NO: 1175) |
| 329 | CAV1 (SEQ ID NO: 47) | TAAGACGCGTTTTTTGGA (SEQ ID NO: 1176) |
| 330 | CAV1 (SEQ ID NO: 47) | TAAGATGTGTTTTTTGGA (SEQ ID NO: 1177) |
| 331 | CAV1 (SEQ ID NO: 47) | AATACGTAGATTCGGAGGT (SEQ ID NO: 1178) |
| 332 | CAV1 (SEQ ID NO: 47) | AATATGTAGATTGAGGT (SEQ ID NO: 1179) |
| 333 | CAV1 (SEQ ID NO: 47) | TAGATTCGGAGGTAGGTA (SEQ ID NO: 1180) |
| 334 | CAV1 (SEQ ID NO: 47) | TAGATTTGGAGGTAGGTA (SEQ ID NO: 1181) |
| 335 | CDH13 (SEQ ID NO: 48) | TAAAACGAGGGAGCGTTA (SEQ ID NO: 1182) |
| 336 | CDH13 (SEQ ID NO: 48) | TAAAATGAGGGAGTGTTA (SEQ ID NO: 1183) |
| 337 | CDH13 (SEQ ID NO: 48) | AAGGAATTCGTTTTGTAAA (SEQ ID NO: 1184) |
| 338 | CDH13 (SEQ ID NO: 48) | AAGGAATTTGTTTTGTAAA (SEQ ID NO: 1185) |
| 339 | CDH13 (SEQ ID NO: 48) | AAGTGGTCGTTAGTTTTT (SEQ ID NO: 1186) |
| 340 | CDH13 (SEQ ID NO: 48) | AAGTGGTTGTTAGTTTTT (SEQ ID NO: 1187) |
| 341 | NDRG1 (SEQ ID NO: 49) | GAGTAGGACGGTGTTAAG (SEQ ID NO: 1188) |
| 342 | NDRG1 (SEQ ID NO: 49) | GAGTAGGATGGTGTTAAG (SEQ ID NO: 1189) |
| 343 | NDRG1 (SEQ ID NO: 49) | TAAATTTAACGTTGGGTAG (SEQ ID NO: 1190) |

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| 344 | NDRG1 (SEQ ID NO: 49) | TAAATTTAATGTTGGGTAG (SEQ ID NO: 1191) |
| 345 | NDRG1 (SEQ ID NO: 49) | GATAATGACGGTGTAGT (SEQ ID NO: 1192) |
| 346 | NDRG1 (SEQ ID NO: 49) | GATAATGATGGTGTAGT (SEQ ID NO: 1193) |
| 347 | NDRG1 (SEQ ID NO: 49) | GTTGTACGTTAGGAGTTA (SEQ ID NO: 1194) |
| 348 | NDRG1 (SEQ ID NO: 49) | GTTGTATGTTAGGAGTTA (SEQ ID NO: 1195) |
| 349 | PTGS2 (SEQ ID NO: 50) | TTTATCGGGTTTACGTAATT (SEQ ID NO: 1196) |
| 350 | PTGS2 (SEQ ID NO: 50) | TTTATTGGGTTTATGTAATT (SEQ ID NO: 1197) |
| 351 | PTGS2 (SEQ ID NO: 50) | GTACGAAAAGGCGGAAAG (SEQ ID NO: 1198) |
| 352 | PTGS2 (SEQ ID NO: 50) | GTATGAAAAGGTGGAAAG (SEQ ID NO: 1199) |
| 353 | PTGS2 (SEQ ID NO: 50) | ATTGGTTTTTCGGAAGCGTT (SEQ ID NO: 1200) |
| 354 | PTGS2 (SEQ ID NO: 50) | ATTGGTTTTTGGAAGTGTT (SEQ ID NO: 1201) |
| 355 | PTGS2 (SEQ ID NO: 50) | AAGCGTTCGGGTAAAGAT (SEQ ID NO: 1202) |
| 356 | PTGS2 (SEQ ID NO: 50) | AAGTGTTTGGGTAAAGAT (SEQ ID NO: 1203) |
| 357 | THBS1 (SEQ ID NO: 51) | TATTTTACGGGGACGGTG (SEQ ID NO: 1204) |
| 358 | THBS1 (SEQ ID NO: 51) | TATTTTATGGGGATGGTG (SEQ ID NO: 1205) |
| 359 | THBS1 (SEQ ID NO: 51) | GATTAGTTCGTTCGAAAGT (SEQ ID NO: 1206) |
| 360 | THBS1 (SEQ ID NO: 51) | GATTAGTTTGTGTGAAAGT (SEQ ID NO: 1207) |
| 361 | THBS1 (SEQ ID NO: 51) | GTGGCGTAAGAGTACGAG (SEQ ID NO: 1208) |
| 362 | THBS1 (SEQ ID NO: 51) | GTGGTGTAAGAGTATGAG (SEQ ID NO: 1209) |
| 363 | TMEFF2 (SEQ ID NO: 52) | ATAGGTTACGGGTTGGAG (SEQ ID NO: 1210) |
| 364 | TMEFF2 (SEQ ID NO: 52) | ATAGGTTATGGGTTGGAG (SEQ ID NO: 1211) |
| 365 | TMEFF2 (SEQ ID NO: 52) | AAATTTGCGAACGTTTGG (SEQ ID NO: 1212) |
| 366 | TMEFF2 (SEQ ID NO: 52) | AAATTTGTGAATGTTTGG (SEQ ID NO: 1213) |
| 367 | TMEFF2 (SEQ ID NO: 52) | AAATGGAGTTCGTTTTTT (SEQ ID NO: 1214) |
| 368 | TMEFF2 (SEQ ID NO: 52) | AAATGGAGTTTGTTTTTT (SEQ ID NO: 1215) |

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| 369 | TMEFF2 (SEQ ID NO: 52) | GGTCGATGTTTTTCGGTAA (SEQ ID NO: 1216) |
| 370 | TMEFF2 (SEQ ID NO: 52) | GGTTGATGTTTTTGGTAA (SEQ ID NO: 1217) |
| 371 | PLAU (SEQ ID NO: 53) | TGAGGTTTCGTTTAAAGA (SEQ ID NO: 1218) |
| 372 | PLAU (SEQ ID NO: 53) | TGAGGTTTTGTTTAAAGA (SEQ ID NO: 1219) |
| 373 | PLAU (SEQ ID NO: 53) | TTATTTACGTGTGTGGAG (SEQ ID NO: 1220) |
| 374 | PLAU (SEQ ID NO: 53) | TTATTTATGTGTGTGGAG (SEQ ID NO: 1221) |
| 375 | PLAU (SEQ ID NO: 53) | GGTGATTAGCGTTATATATT (SEQ ID NO: 1222) |
| 376 | PLAU (SEQ ID NO: 53) | GGTGATTAGTGTTATATATT (SEQ ID NO: 1223) |
| 377 | PLAU (SEQ ID NO: 53) | GATAAGTCGTGTTTTGAG (SEQ ID NO: 1224) |
| 378 | PLAU (SEQ ID NO: 53) | GATAAGTTGTGTTTTGAG (SEQ ID NO: 1225) |
| 379 | TMEFF2 (SEQ ID NO: 54) | TAGTTCGTTTCGGTGAAGT (SEQ ID NO: 1226) |
| 380 | TMEFF2 (SEQ ID NO: 54) | TAGTTTGTGTTGGTGAAGT (SEQ ID NO: 1227) |
| 381 | TMEFF2 (SEQ ID NO: 54) | GTGAAGTTCGTTGTTTTT (SEQ ID NO: 1228) |
| 382 | TMEFF2 (SEQ ID NO: 54) | GTGAAGTTTGTGTTTTT (SEQ ID NO: 1229) |
| 383 | TMEFF2 (SEQ ID NO: 54) | TTAAACGTTTATCGGTTGG (SEQ ID NO: 1230) |
| 384 | TMEFF2 (SEQ ID NO: 54) | TTAAATGTTTATTGGTTGG (SEQ ID NO: 1231) |
| 385 | TMEFF2 (SEQ ID NO: 54) | TTTAATTTTCGTAGAAGAATA (SEQ ID NO: 1232) |
| 386 | TMEFF2 (SEQ ID NO: 54) | TTTTAATTTTGTAGAAGAATA (SEQ ID NO: 1233) |
| 387 | TMEFF2 (SEQ ID NO: 54) | GAAGAATACGCGTATTTAGT (SEQ ID NO: 1234) |
| 388 | TMEFF2 (SEQ ID NO: 54) | GAAGAATATGTGTATTTAGT (SEQ ID NO: 1235) |
| 389 | DNMT1 (SEQ ID NO: 55) | GTACGGTGTTTCGAGGTAT (SEQ ID NO: 1236) |
| 390 | DNMT1 (SEQ ID NO: 55) | GTATGGTGTTTGAGGTAT (SEQ ID NO: 1237) |
| 391 | DNMT1 (SEQ ID NO: 55) | TTTTTACGCGGAGTAGTG (SEQ ID NO: 1238) |
| 392 | DNMT1 (SEQ ID NO: 55) | TTTTTATGTGGAGTAGTG (SEQ ID NO: 1239) |
| 393 | DNMT1 (SEQ ID NO: 55) | GGAATACGTATGCGTAAG (SEQ ID NO: 1240) |

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| 394 | DNMT1 (SEQ ID NO: 55) | GGGAATATGTATGTGTAAG (SEQ ID NO: 1241) |
| 395 | DNMT1 (SEQ ID NO: 55) | GAACGGAGTCGGTTATGT (SEQ ID NO: 1242) |
| 396 | DNMT1 (SEQ ID NO: 55) | GAATGGAGTTGGTTATGT (SEQ ID NO: 1243) |
| 397 | DNMT1 (SEQ ID NO: 55) | AAACGGAGAGAGGCGATA (SEQ ID NO: 1244) |
| 398 | DNMT1 (SEQ ID NO: 55) | AAATGGAGAGAGGTGATA (SEQ ID NO: 1245) |
| 399 | ESR1 (SEQ ID NO: 70) | TTTTTTGGTCGTGAAATT (SEQ ID NO: 1246) |
| 400 | ESR1 (SEQ ID NO: 70) | TTTTTTGGTTGTGAAATT (SEQ ID NO: 1247) |
| 401 | ESR1 (SEQ ID NO: 70) | TTTAGTAGCGACGATAAGTA (SEQ ID NO: 1248) |
| 402 | ESR1 (SEQ ID NO: 70) | TTTAGTAGTGATGATAAGTA (SEQ ID NO: 1249) |
| 403 | ESR1 (SEQ ID NO: 70) | GGATCGTTTTAAATCGAGT (SEQ ID NO: 1250) |
| 404 | ESR1 (SEQ ID NO: 70) | GGATTGTTTTAAATTGAGT (SEQ ID NO: 1251) |
| 405 | ESR1 (SEQ ID NO: 70) | TGGAGGTTCTGGGAGTTTA (SEQ ID NO: 1252) |
| 406 | ESR1 (SEQ ID NO: 70) | TGGAGGTTTGGGAGTTTA (SEQ ID NO: 1253) |
| 407 | ESR1 (SEQ ID NO: 70) | TTTTATCGGATTCGTAGGT (SEQ ID NO: 1254) |
| 408 | ESR1 (SEQ ID NO: 70) | TTTTATTGGATTGTAGGT (SEQ ID NO: 1255) |
| 409 | APAF1 (SEQ ID NO: 57) | AGTAGGACGTGGTCGTTT (SEQ ID NO: 1256) |
| 410 | APAF1 (SEQ ID NO: 57) | AGTAGGATGTGGTTGTTT (SEQ ID NO: 1257) |
| 411 | APAF1 (SEQ ID NO: 57) | ATTCGGCGGGATTTGATT (SEQ ID NO: 1258) |
| 412 | APAF1 (SEQ ID NO: 57) | ATTTGGTGGGATTTGATT (SEQ ID NO: 1259) |
| 413 | APAF1 (SEQ ID NO: 57) | TAGCGAGTGGACGTGATT (SEQ ID NO: 1260) |
| 414 | APAF1 (SEQ ID NO: 57) | TAGTGAGTGGATGTGATT (SEQ ID NO: 1261) |
| 415 | HOXA5 (SEQ ID NO: 58) | AGTTAGTCGGGTTTTAAG (SEQ ID NO: 1262) |
| 416 | HOXA5 (SEQ ID NO: 58) | AGTTAGTTGGGTTTTAAG (SEQ ID NO: 1263) |
| 417 | HOXA5 (SEQ ID NO: 58) | ATATGGTTTTCTGTGTTATT (SEQ ID NO: 1264) |
| 418 | HOXA5 (SEQ ID NO: 58) | ATATGGTTTTTGTGTTATT (SEQ ID NO: 1265) |

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| 419 | HOXA5 (SEQ ID NO: 58) | TTTTTGCGAGCGTATGAG (SEQ ID NO: 1266) |
| 420 | HOXA5 (SEQ ID NO: 58) | TTTTGTGAGTGTATGAG (SEQ ID NO: 1267) |
| 421 | RASSF1 (SEQ ID NO: 59) | GTTTCGGGGTTCGTAATA (SEQ ID NO: 1268) |
| 422 | RASSF1 (SEQ ID NO: 59) | GTTTTGGGGTTTGTAATA (SEQ ID NO: 1269) |
| 423 | RASSF1 (SEQ ID NO: 59) | AGGTAGTTTTTCGAGAATG (SEQ ID NO: 1270) |
| 424 | RASSF1 (SEQ ID NO: 59) | AGGTAGTTTTTGAGAATG (SEQ ID NO: 1271) |
| 425 | RASSF1 (SEQ ID NO: 59) | TTTGTGTCGTCGGGAAAT (SEQ ID NO: 1272) |
| 426 | RASSF1 (SEQ ID NO: 59) | TTTGTGTTGTTGGGAAAT (SEQ ID NO: 1273) |
| 427 | RASSF1 (SEQ ID NO: 59) | TTAGTTTTTCGCGTAGAATTA (SEQ ID NO: 1274) |
| 428 | RASSF1 (SEQ ID NO: 59) | TTAGTTTTTGTGTAGAATTA (SEQ ID NO: 1275) |
| 429 | RASSF1 (SEQ ID NO: 59) | TATTTGCGGAGTCGGTAA (SEQ ID NO: 1276) |
| 430 | RASSF1 (SEQ ID NO: 59) | TATTTGTGGAGTTGGTAA (SEQ ID NO: 1277) |
| 431 | RASSF1 (SEQ ID NO: 59) | TTTGTAGCGGGTGGAGTA (SEQ ID NO: 1278) |
| 432 | RASSF1 (SEQ ID NO: 59) | TTTGTAGTGGGTGGAGTA (SEQ ID NO: 1279) |
| 433 | ABCB1 (SEQ ID NO: 1) | AAATGCGAATTTTCGAGAAA (SEQ ID NO: 1280) |
| 434 | ABCB1 (SEQ ID NO: 1) | AAATGTGAATTTTGAGAAA (SEQ ID NO: 1281) |
| 435 | ABCB1 (SEQ ID NO: 1) | TTCGTAGTTTTTCGAGGAA (SEQ ID NO: 1282) |
| 436 | ABCB1 (SEQ ID NO: 1) | TTTGTAGTTTTTTGAGGAA (SEQ ID NO: 1283) |
| 437 | ABCB1 (SEQ ID NO: 1) | TAGTTAATTCGGGTCGGG (SEQ ID NO: 1284) |
| 438 | ABCB1 (SEQ ID NO: 1) | TAGTTAATTTGGGTTGGG (SEQ ID NO: 1285) |
| 439 | ABCB1 (SEQ ID NO: 1) | TGAGTATAGTCGTTTCGTT (SEQ ID NO: 1286) |
| 440 | ABCB1 (SEQ ID NO: 1) | TGAGTATAGTTGTTTTGTT (SEQ ID NO: 1287) |
| 441 | ABCB1 (SEQ ID NO: 1) | GTTTATTCGAGTAGCGGTT (SEQ ID NO: 1288) |
| 442 | ABCB1 (SEQ ID NO: 1) | GTTTATTTGAGTAGTGGTT (SEQ ID NO: 1289) |
| 443 | HLA-F (SEQ ID NO: 9) | AATTTTTGCGGTTTCGATAG (SEQ ID NO: 1290) |

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| 444 | HLA-F (SEQ ID NO: 9) | AATTTTGTGGTTTGATAG (SEQ ID NO: 1291) |
| 445 | HLA-F (SEQ ID NO: 9) | GGGCGTAGGTTACGATTA (SEQ ID NO: 1292) |
| 446 | HLA-F (SEQ ID NO: 9) | GGGTGTAGGTTATGATTA (SEQ ID NO: 1293) |
| 447 | HLA-F (SEQ ID NO: 9) | GAGTTTTTCGGATTTCGAAAT (SEQ ID NO: 1294) |
| 448 | HLA-F (SEQ ID NO: 9) | GAGTTTTTGGATTTGAAAT (SEQ ID NO: 1295) |
| 449 | HLA-F (SEQ ID NO: 9) | GAACGAGGATTGCGTTT (SEQ ID NO: 1296) |
| 450 | HLA-F (SEQ ID NO: 9) | GAATGAGGATTGTGTTT (SEQ ID NO: 1297) |
| 451 | APOC2 (SEQ ID NO: 2) | ATTTTAAGGCGTGTTAGT (SEQ ID NO: 1298) |
| 452 | APOC2 (SEQ ID NO: 2) | ATTTTAAGGTGTGTTAGT (SEQ ID NO: 1299) |
| 453 | APOC2 (SEQ ID NO: 2) | TGTCGGAGGCGAATTTT (SEQ ID NO: 1300) |
| 454 | APOC2 (SEQ ID NO: 2) | TGTTGGAGGTGAATTTT (SEQ ID NO: 1301) |
| 455 | APOC2 (SEQ ID NO: 2) | TTGGGGGACGTTATTGTT (SEQ ID NO: 1302) |
| 456 | APOC2 (SEQ ID NO: 2) | TTGGGGGATGTTATTGTT (SEQ ID NO: 1303) |
| 457 | APOC2 (SEQ ID NO: 2) | TGGGTTTGCGGAGAATGG (SEQ ID NO: 1304) |
| 458 | APOC2 (SEQ ID NO: 2) | TGGGTTTGTGGAGAATGG (SEQ ID NO: 1305) |
| 459 | CACNA1G (SEQ ID NO: 3) | GGTCGAGTCGATAAAGTTT (SEQ ID NO: 1306) |
| 460 | CACNA1G (SEQ ID NO: 3) | GGTTGAGTTGATAAAGTTT (SEQ ID NO: 1307) |
| 461 | CACNA1G (SEQ ID NO: 3) | TTACGTGTTTAAGTACGAAG (SEQ ID NO: 1308) |
| 462 | CACNA1G (SEQ ID NO: 3) | TTATGTGTTTAAGTATGAAG (SEQ ID NO: 1309) |
| 463 | CACNA1G (SEQ ID NO: 3) | GAATTGATTCTGGGAGTAT (SEQ ID NO: 1310) |
| 464 | CACNA1G (SEQ ID NO: 3) | GAATTGATTGGGAGTAT (SEQ ID NO: 1311) |
| 465 | CACNA1G (SEQ ID NO: 3) | TAGGTTCTGTTTAGAGTTG (SEQ ID NO: 1312) |
| 466 | CACNA1G (SEQ ID NO: 3) | TAGGTTTGTTTAGAGTTG (SEQ ID NO: 1313) |
| 467 | EGR4 (SEQ ID NO: 4) | GGAAGCGTATTTATCGGA (SEQ ID NO: 1314) |
| 468 | EGR4 (SEQ ID NO: 4) | GGAAGTGTATTTATTGGA (SEQ ID NO: 1315) |

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| 469 | EGR4 (SEQ ID NO: 4) | AGGCGTAGCGTTTTAGAT (SEQ ID NO: 1316) |
| 470 | EGR4 (SEQ ID NO: 4) | AGGTGTAGTGTTTTAGAT (SEQ ID NO: 1317) |
| 471 | EGR4 (SEQ ID NO: 4) | TAACGTTATAGTTCGAGTTT (SEQ ID NO: 1318) |
| 472 | EGR4 (SEQ ID NO: 4) | TAATGTTATAGTTTGAGTTT (SEQ ID NO: 1319) |
| 473 | AR (SEQ ID NO: 5) | AGAGGTTGCGTTTTAGAG (SEQ ID NO: 1320) |
| 474 | AR (SEQ ID NO: 5) | AGAGGTTGTGTTTTAGAG (SEQ ID NO: 1321) |
| 475 | AR (SEQ ID NO: 5) | TTATAGTCGTAGTCGGTTT (SEQ ID NO: 1322) |
| 476 | AR (SEQ ID NO: 5) | TTATAGTTGTAGTTGGTTT (SEQ ID NO: 1323) |
| 477 | AR (SEQ ID NO: 5) | TTATTTTCGAGAGAGGTTG (SEQ ID NO: 1324) |
| 478 | AR (SEQ ID NO: 5) | TTATTTTGAGAGAGGTTG (SEQ ID NO: 1325) |
| 479 | AR (SEQ ID NO: 5) | GTCGTGGTCGTTAGTAAG (SEQ ID NO: 1326) |
| 480 | AR (SEQ ID NO: 5) | GTTGTGGTTGTTAGTAAG (SEQ ID NO: 1327) |
| 481 | AR (SEQ ID NO: 5) | AGTATTTTTCGGACGAGGA (SEQ ID NO: 1328) |
| 482 | AR (SEQ ID NO: 5) | AGTATTTTGGATGAGGA (SEQ ID NO: 1329) |
| 483 | RB1 (SEQ ID NO: 6) | TATTAGATTTTCGGGATAGG (SEQ ID NO: 1330) |
| 484 | RB1 (SEQ ID NO: 6) | TATTAGATTTTGGGATAGG (SEQ ID NO: 1331) |
| 485 | RB1 (SEQ ID NO: 6) | GTAGAAGTACGTTCCGGT (SEQ ID NO: 1332) |
| 486 | RB1 (SEQ ID NO: 6) | GTAGAAGTATGTTTGGGT (SEQ ID NO: 1333) |
| 487 | RB1 (SEQ ID NO: 6) | GTATCGATTAGCGTTTTAGT (SEQ ID NO: 1334) |
| 488 | RB1 (SEQ ID NO: 6) | GTATTGATTAGTGTTTTAGT (SEQ ID NO: 1335) |
| 489 | RB1 (SEQ ID NO: 6) | AAAGGCGTTATGTCGTTTA (SEQ ID NO: 1336) |
| 490 | RB1 (SEQ ID NO: 6) | AAAGGTGTTATGTTGTTTA (SEQ ID NO: 1337) |
| 491 | BRCA2 (SEQ ID NO: 60) | TATAAGTTCGCGTTGG (SEQ ID NO: 1338) |
| 492 | BRCA2 (SEQ ID NO: 60) | TTATAAGTTTGTGTTGGT (SEQ ID NO: 1339) |
| 493 | BRCA2 (SEQ ID NO: 60) | TATTCGAGGCCGTAGTA (SEQ ID NO: 1340) |

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| 494 | BRCA2 (SEQ ID NO: 60) | TATTTGAGGTGTAGTAGA (SEQ ID NO: 1341) |
| 495 | BRCA2 (SEQ ID NO: 60) | TTTATCGTCGTAAAAGAT (SEQ ID NO: 1342) |
| 496 | BRCA2 (SEQ ID NO: 60) | GATTTATTGTTGTAAAAGAT (SEQ ID NO: 1343) |
| 497 | BRCA2 (SEQ ID NO: 60) | ATTCGTTTTAGAGGCGTA (SEQ ID NO: 1344) |
| 498 | BRCA2 (SEQ ID NO: 60) | ATTTGTTTTAGAGGTGTA (SEQ ID NO: 1345) |
| 499 | BRCA2 (SEQ ID NO: 60) | TAAGAAGTCGCGGTAG (SEQ ID NO: 1346) |
| 500 | BRCA2 (SEQ ID NO: 60) | GTAAGAAGTTGTGGTAG (SEQ ID NO: 1347) |
| 501 | CCND1 (SEQ ID NO: 61) | TGTCGGCGTAGTAGTA (SEQ ID NO: 1348) |
| 502 | CCND1 (SEQ ID NO: 61) | TGTTGGTGTAGTAGTAG (SEQ ID NO: 1349) |
| 503 | CCND1 (SEQ ID NO: 61) | AGAAGCGAGAGTCGAG (SEQ ID NO: 1350) |
| 504 | CCND1 (SEQ ID NO: 61) | TAGAAGTGAGAGTTGAG (SEQ ID NO: 1351) |
| 505 | CCND1 (SEQ ID NO: 61) | TTTTTAACGATCGGGT (SEQ ID NO: 1352) |
| 506 | CCND1 (SEQ ID NO: 61) | TTAATGATTGGGTGTTG (SEQ ID NO: 1353) |
| 507 | CCND1 (SEQ ID NO: 61) | TGTCGTTTATGCGGAA (SEQ ID NO: 1354) |
| 508 | CCND1 (SEQ ID NO: 61) | TGTTGTTTATGTGGAAG (SEQ ID NO: 1355) |
| 509 | CCND1 (SEQ ID NO: 61) | GGAAGATCGTCGTTAT (SEQ ID NO: 1356) |
| 510 | CCND1 (SEQ ID NO: 61) | AGATTGTTGTTATTTGGA (SEQ ID NO: 1357) |
| 511 | EDNRB (SEQ ID NO: 62) | GTTTTATTTCGAGAAATGT (SEQ ID NO: 1358) |
| 512 | EDNRB (SEQ ID NO: 62) | TGTTTTATTTGAGAAATGT (SEQ ID NO: 1359) |
| 513 | EDNRB (SEQ ID NO: 62) | GGAATGTTTCGTGTTTA (SEQ ID NO: 1360) |
| 514 | EDNRB (SEQ ID NO: 62) | GGAATGTTTGTGTTTAT (SEQ ID NO: 1361) |
| 515 | EDNRB (SEQ ID NO: 62) | TAGGGGTCGATTTTAA (SEQ ID NO: 1362) |
| 516 | EDNRB (SEQ ID NO: 62) | TTAGGGGTTGATTTTAA (SEQ ID NO: 1363) |
| 517 | EDNRB (SEQ ID NO: 62) | AATATAATCGGTTAGGTTA (SEQ ID NO: 1364) |
| 518 | EDNRB (SEQ ID NO: 62) | GATAATATAATTGGTTAGGT (SEQ ID NO: 1365) |

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| 519 | EGFR (SEQ ID NO: 63) | AAGTTTTTCGCGAGTTT (SEQ ID NO: 1366) |
| 520 | EGFR (SEQ ID NO: 63) | AAAGTTTTTGTGAGTTTT (SEQ ID NO: 1367) |
| 521 | EGFR (SEQ ID NO: 63) | GTATTATTTTCGGACGTT (SEQ ID NO: 1368) |
| 522 | EGFR (SEQ ID NO: 63) | TATTTTGGATGTTTGGTA (SEQ ID NO: 1369) |
| 523 | EGFR (SEQ ID NO: 63) | TTTCGAGAGGGTTTCGTA (SEQ ID NO: 1370) |
| 524 | EGFR (SEQ ID NO: 63) | TTTTGAGAGGGTTTTGTA (SEQ ID NO: 1371) |
| 525 | EGFR (SEQ ID NO: 63) | ATTATTCGACGTTGGT (SEQ ID NO: 1372) |
| 526 | EGFR (SEQ ID NO: 63) | TTATTATTTGATGTTGGTT (SEQ ID NO: 1373) |
| 527 | EGFR (SEQ ID NO: 63) | GTAAGTTCGCGGGGAT (SEQ ID NO: 1374) |
| 528 | EGFR (SEQ ID NO: 63) | GTAAGTTTGTGGGGAT (SEQ ID NO: 1375) |
| 529 | ERBB2 (SEQ ID NO: 64) | AGATCGCGTTATTGTT (SEQ ID NO: 1376) |
| 530 | ERBB2 (SEQ ID NO: 64) | AGAGATTGTGTTATTGTT (SEQ ID NO: 1377) |
| 531 | ERBB2 (SEQ ID NO: 64) | ATTTTCGATTTCGGGGGA (SEQ ID NO: 1378) |
| 532 | ERBB2 (SEQ ID NO: 64) | AATTTATTTTGGATTTGGG (SEQ ID NO: 1379) |
| 533 | ERBB2 (SEQ ID NO: 64) | GGATTTTTTCGAGGAAAA (SEQ ID NO: 1380) |
| 534 | ERBB2 (SEQ ID NO: 64) | GGGATTTTTTGAGGAAA (SEQ ID NO: 1381) |
| 535 | ERBB2 (SEQ ID NO: 64) | TAGGTTTGC CGGAAGA (SEQ ID NO: 1382) |
| 536 | ERBB2 (SEQ ID NO: 64) | TTTGTGTGAAGAGAGG (SEQ ID NO: 1383) |
| 537 | FOS (SEQ ID NO: 65) | TTTCGGGTTTCGAGTAA (SEQ ID NO: 1384) |
| 538 | FOS (SEQ ID NO: 65) | TTTTGGGTTTGAGTAATA (SEQ ID NO: 1385) |
| 539 | FOS (SEQ ID NO: 65) | TTTCGAAGGAATGCGTT (SEQ ID NO: 1386) |
| 540 | FOS (SEQ ID NO: 65) | TTTTGAAGGAATGTGTT (SEQ ID NO: 1387) |
| 541 | FOS (SEQ ID NO: 65) | AGAAACGGTATCGAGT (SEQ ID NO: 1388) |
| 542 | FOS (SEQ ID NO: 65) | GGAGAAATGGTATTGAG (SEQ ID NO: 1389) |
| 543 | FOS (SEQ ID NO: 65) | AATTGTTTCGCGGGTTGTA (SEQ ID NO: 1390) |

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| 544 | FOS (SEQ ID NO: 65) | AATTGTTTGTGGGTTGTA (SEQ ID NO: 1391) |
| 545 | NFKB1 (SEQ ID NO: 66) | TATAGGCGTTCGTTATT (SEQ ID NO: 1392) |
| 546 | NFKB1 (SEQ ID NO: 66) | GGATTATAGGTGTTTGTT (SEQ ID NO: 1393) |
| 547 | NFKB1 (SEQ ID NO: 66) | TATTACGTTTCGGTTAATT (SEQ ID NO: 1394) |
| 548 | NFKB1 (SEQ ID NO: 66) | ATTATGTTTGGTTAATTTT (SEQ ID NO: 1395) |
| 549 | NFKB1 (SEQ ID NO: 66) | AGTTATCGTATTCGGTT (SEQ ID NO: 1396) |
| 550 | NFKB1 (SEQ ID NO: 66) | TGAGTTATTGTATTTGGT (SEQ ID NO: 1397) |
| 551 | NFKB1 (SEQ ID NO: 66) | TTTAGTTTTTCGGAGTTA (SEQ ID NO: 1398) |
| 552 | NFKB1 (SEQ ID NO: 66) | TTAGTTTTTTGGAGTTAAA (SEQ ID NO: 1399) |
| 553 | NFKB1 (SEQ ID NO: 66) | AAAGGTCGATTGTTGG (SEQ ID NO: 1400) |
| 554 | NFKB1 (SEQ ID NO: 66) | TAAAGGTTGATTGTTGG (SEQ ID NO: 1401) |
| 555 | X51730 PGR (SEQ ID NO: 67) | TATCGAGAGGTTTCGAT (SEQ ID NO: 1402) |
| 556 | X51730 PGR (SEQ ID NO: 67) | TGTATTGAGAGGTTTGAT (SEQ ID NO: 1403) |
| 557 | X51730 PGR (SEQ ID NO: 67) | GAGTCGCGTGTTATTA (SEQ ID NO: 1404) |
| 558 | X51730 PGR (SEQ ID NO: 67) | AAAGGAGTTGTGTGTT (SEQ ID NO: 1405) |
| 559 | X51730 PGR (SEQ ID NO: 67) | AAATTGTCGTCGTAGT (SEQ ID NO: 1406) |
| 560 | X51730 PGR (SEQ ID NO: 67) | ATTAAATTGTTGTTGTAGT (SEQ ID NO: 1407) |
| 561 | X51730 PGR (SEQ ID NO: 67) | TGTCGTTTCGTTGGGATAA (SEQ ID NO: 1408) |
| 562 | X51730 PGR (SEQ ID NO: 67) | TGTTGTTTGTGTTGGGATAA (SEQ ID NO: 1409) |
| 563 | TP53 (SEQ ID NO: 68) | TTTTTACGACGGTGAT (SEQ ID NO: 1410) |
| 564 | TP53 (SEQ ID NO: 68) | TGTTTTTTATGATGGTGA (SEQ ID NO: 1411) |
| 565 | TP53 (SEQ ID NO: 68) | GAAAATCGTTGGGGTT (SEQ ID NO: 1412) |
| 566 | TP53 (SEQ ID NO: 68) | GGAAAATTGTTGGGGT (SEQ ID NO: 1413) |
| 567 | TP53 (SEQ ID NO: 68) | AGTCGGTTTAAAGCGTA (SEQ ID NO: 1414) |
| 568 | TP53 (SEQ ID NO: 68) | AGTTGGTTTAAAGTGTAT (SEQ ID NO: 1415) |

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| 569 | TP53 (SEQ ID NO: 68) | AGTTTTTCGGTTTCGTTAGA (SEQ ID NO: 1416) |
| 570 | TP53 (SEQ ID NO: 68) | AGTTTTTGGTTTTGTTAGA (SEQ ID NO: 1417) |
| 571 | TP73 (SEQ ID NO: 69) | GTGCGAGTTAGTCGGA (SEQ ID NO: 1418) |
| 572 | TP73 (SEQ ID NO: 69) | GTGTGAGTTAGTTGGA (SEQ ID NO: 1419) |
| 573 | TP73 (SEQ ID NO: 69) | TATCGGTTCCGAGTTA (SEQ ID NO: 1420) |
| 574 | TP73 (SEQ ID NO: 69) | AGGATATTGGTTTGGAG (SEQ ID NO: 1421) |
| 575 | TP73 (SEQ ID NO: 69) | AGAGTCGTTCCGAATT (SEQ ID NO: 1422) |
| 576 | TP73 (SEQ ID NO: 69) | TGAGAGTTGTTTGAAT (SEQ ID NO: 1423) |
| 577 | ESR1 (SEQ ID NO: 70) | TTTTCGCGTTTATTTAA (SEQ ID NO: 1424) |
| 578 | ESR1 (SEQ ID NO: 70) | TTTTTTGTGTTTATTTAAGT (SEQ ID NO: 1425) |
| 579 | ESR1 (SEQ ID NO: 70) | AGTAGATTTTCGTGCGTT (SEQ ID NO: 1426) |
| 580 | ESR1 (SEQ ID NO: 70) | AGTAGATTTTTGTGTGTT (SEQ ID NO: 1427) |
| 581 | ESR1 (SEQ ID NO: 70) | AGTAGCGACGATAAGT (SEQ ID NO: 1428) |
| 582 | ESR1 (SEQ ID NO: 70) | TTTAGTAGTGATGATAAGT (SEQ ID NO: 1429) |
| 583 | ESR1 (SEQ ID NO: 70) | GATCGTTTTAAATCGAGT (SEQ ID NO: 1430) |
| 584 | ESR1 (SEQ ID NO: 70) | GGATTGTTTTAAATTGAGT (SEQ ID NO: 1431) |
| 585 | ESR1 (SEQ ID NO: 70) | TATCGGATTCGTAGGT (SEQ ID NO: 1432) |
| 586 | ESR1 (SEQ ID NO: 70) | TTTATTGGATTTGTAGGTT (SEQ ID NO: 1433) |
| 587 | SERPINE1 (SEQ ID NO: 71) | AGTCGTGTATTATCGGA (SEQ ID NO: 1434) |
| 588 | SERPINE1 (SEQ ID NO: 71) | AGTTGTGTATTATTGGAG (SEQ ID NO: 1435) |
| 589 | SERPINE1 (SEQ ID NO: 71) | AGGCGGTCGGGTATAT (SEQ ID NO: 1436) |
| 590 | SERPINE1 (SEQ ID NO: 71) | AGGTGGTTGGGTATAT (SEQ ID NO: 1437) |
| 591 | SERPINE1 (SEQ ID NO: 71) | TAGAGTATCGGGTGGA (SEQ ID NO: 1438) |
| 592 | SERPINE1 (SEQ ID NO: 71) | AGAGTATTGGGTGGAT (SEQ ID NO: 1439) |
| 593 | SERPINE1 (SEQ ID NO: 71) | AGGATATTCGGGAGAG (SEQ ID NO: 1440) |

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| 594 | SERPINE1 (SEQ ID NO: 71) | AGGATATTTGGGAGAGA (SEQ ID NO: 1441) |
| 595 | CALM1 (SEQ ID NO: 72) | TGGCGTTCGTTTTATTAA (SEQ ID NO: 1442) |
| 596 | CALM1 (SEQ ID NO: 72) | TGGTGTGTTGTTTTATTAAA (SEQ ID NO: 1443) |
| 597 | CALM1 (SEQ ID NO: 72) | AGTAGTATTCGAGTTAAAT (SEQ ID NO: 1444) |
| 598 | CALM1 (SEQ ID NO: 72) | AGTAGTATTTGAGTTAAATT (SEQ ID NO: 1445) |
| 599 | CALM1 (SEQ ID NO: 72) | TAGAGGACGAGGTAGT (SEQ ID NO: 1446) |
| 600 | CALM1 (SEQ ID NO: 72) | TAGAGGATGAGGTAGTT (SEQ ID NO: 1447) |
| 601 | CALM1 (SEQ ID NO: 72) | TTAGTTGTCGAGGAGA (SEQ ID NO: 1448) |
| 602 | CALM1 (SEQ ID NO: 72) | TTTAGTTGTTGAGGAGA (SEQ ID NO: 1449) |
| 603 | CSNK2B (SEQ ID NO: 73) | TGATTTTCGAATTTTGGT (SEQ ID NO: 1450) |
| 604 | CSNK2B (SEQ ID NO: 73) | TGATTTTGAATTTTGGT (SEQ ID NO: 1451) |
| 605 | CSNK2B (SEQ ID NO: 73) | GAACGTTTTAGTGCGTT (SEQ ID NO: 1452) |
| 606 | CSNK2B (SEQ ID NO: 73) | GGAATGTTTTAGTGTGTT (SEQ ID NO: 1453) |
| 607 | CSNK2B (SEQ ID NO: 73) | GTGCGAATTAGTTTCGTT (SEQ ID NO: 1454) |
| 608 | CSNK2B (SEQ ID NO: 73) | GTGTGAATTAGTTTTGTT (SEQ ID NO: 1455) |
| 609 | CSNK2B (SEQ ID NO: 73) | ATTTTCGGTTAATTCGTT (SEQ ID NO: 1456) |
| 610 | CSNK2B (SEQ ID NO: 73) | ATTTTGGTTAATTTGTTG (SEQ ID NO: 1457) |
| 611 | FGFR1 (SEQ ID NO: 74) | GTATTTTCGTTGGTTAAGT (SEQ ID NO: 1458) |
| 612 | FGFR1 (SEQ ID NO: 74) | GTGTATTTTGTGTTGTTAA (SEQ ID NO: 1459) |
| 613 | FGFR1 (SEQ ID NO: 74) | ATGTGAACGAAGTTAAG (SEQ ID NO: 1460) |
| 614 | FGFR1 (SEQ ID NO: 74) | ATGTGAATGAAGTTAAGA (SEQ ID NO: 1461) |
| 615 | FGFR1 (SEQ ID NO: 74) | TATGTTTCGGGGAAGT (SEQ ID NO: 1462) |
| 616 | FGFR1 (SEQ ID NO: 74) | TATGTTTTGGGGAAGTA (SEQ ID NO: 1463) |
| 617 | FGFR1 (SEQ ID NO: 74) | TATGATTCGTTTTTTAAGA (SEQ ID NO: 1464) |
| 618 | FGFR1 (SEQ ID NO: 74) | AGTTATGATTTGTTTTTTAA (SEQ ID NO: 1465) |

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| 619 | MKI67 (SEQ ID NO: 75) | TTGAGATCGCGTTATT (SEQ ID NO: 1466) |
| 620 | MKI67 (SEQ ID NO: 75) | AGTTGAGATTGTGTTATT (SEQ ID NO: 1467) |
| 621 | MKI67 (SEQ ID NO: 75) | AGGATCGTTTGAGTCGGG (SEQ ID NO: 1468) |
| 622 | MKI67 (SEQ ID NO: 75) | AGGATTGTTTGAGTTGGG (SEQ ID NO: 1469) |
| 623 | MKI67 (SEQ ID NO: 75) | AAATTCGTTAGGCGTG (SEQ ID NO: 1470) |
| 624 | MKI67 (SEQ ID NO: 75) | AATTTGTTAGGTGTGGT (SEQ ID NO: 1471) |
| 625 | MKI67 (SEQ ID NO: 75) | TGAGTTCGGGAGTTTA (SEQ ID NO: 1472) |
| 626 | MKI67 (SEQ ID NO: 75) | TTGAGTTTGGGAGTTTA (SEQ ID NO: 1473) |
| 627 | NPM1 (SEQ ID NO: 76) | AGTAGTATTCGTTTATTTT (SEQ ID NO: 1474) |
| 628 | NPM1 (SEQ ID NO: 76) | GAGTAGTATTTGTTTATTTT (SEQ ID NO: 1475) |
| 629 | NPM1 (SEQ ID NO: 76) | ATTTAAGTGCGTGTTGT (SEQ ID NO: 1476) |
| 630 | NPM1 (SEQ ID NO: 76) | ATTTAAGTGTGTGTTGT (SEQ ID NO: 1477) |
| 631 | NPM1 (SEQ ID NO: 76) | GTTTTTCGATGGAAGAT (SEQ ID NO: 1478) |
| 632 | NPM1 (SEQ ID NO: 76) | TGTTTTTTGATGGAAGAT (SEQ ID NO: 1479) |
| 633 | NPM1 (SEQ ID NO: 76) | TGATGGACGTGGATAT (SEQ ID NO: 1480) |
| 634 | NPM1 (SEQ ID NO: 76) | TTGATGGATGTGGATAT (SEQ ID NO: 1481) |
| 635 | MAPK1 (SEQ ID NO: 77) | AGTTTTACGTTTCGATT (SEQ ID NO: 1482) |
| 636 | MAPK1 (SEQ ID NO: 77) | TGTAGTTTTATGTTTTGAT (SEQ ID NO: 1483) |
| 637 | MAPK1 (SEQ ID NO: 77) | AAGAAACGATCGAATTT (SEQ ID NO: 1484) |
| 638 | MAPK1 (SEQ ID NO: 77) | AAATGATTGAATTTGGGA (SEQ ID NO: 1485) |
| 639 | MAPK1 (SEQ ID NO: 77) | ATTTATTTTTTCGTGTGTAT (SEQ ID NO: 1486) |
| 640 | MAPK1 (SEQ ID NO: 77) | AATTTATTTTTTGTGTGTAT (SEQ ID NO: 1487) |
| 641 | MAPK1 (SEQ ID NO: 77) | GTGTATCGTGTTTTAAAT (SEQ ID NO: 1488) |
| 642 | MAPK1 (SEQ ID NO: 77) | TGTGTATTGTGTTTTAAAT (SEQ ID NO: 1489) |
| 643 | SYK (SEQ ID NO: 78) | GAAGTTATCGCGTTGG (SEQ ID NO: 1490) |

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| 644 | SYK (SEQ ID NO: 78) | AGAAGTTATTGTGTTGG (SEQ ID NO: 1491) |
| 645 | SYK (SEQ ID NO: 78) | GATCGATGCGGTTTAT (SEQ ID NO: 1492) |
| 646 | SYK (SEQ ID NO: 78) | GGGATTGATGTGGTTTA (SEQ ID NO: 1493) |
| 647 | SYK (SEQ ID NO: 78) | GTTCGGCGGGAGGAGA (SEQ ID NO: 1494) |
| 648 | SYK (SEQ ID NO: 78) | GTTTGGTGGGAGGAGA (SEQ ID NO: 1495) |
| 649 | SYK (SEQ ID NO: 78) | AGTCGATTTTCGTTTAG (SEQ ID NO: 1496) |
| 650 | SYK (SEQ ID NO: 78) | TAGTTGATTTTGTTTAGT (SEQ ID NO: 1497) |
| 651 | SYK (SEQ ID NO: 78) | GGAAGAGTCGCGGGTT (SEQ ID NO: 1498) |
| 652 | SYK (SEQ ID NO: 78) | GGAAGAGTTGTGGGTT (SEQ ID NO: 1499) |
| 653 | TK2 (SEQ ID NO: 79) | AAGTTTCGAGTGTGAT (SEQ ID NO: 1500) |
| 654 | TK2 (SEQ ID NO: 79) | AAGTTTTGAGTGTGATG (SEQ ID NO: 1501) |
| 655 | TK2 (SEQ ID NO: 79) | TTAAGACGGTGGAGAT (SEQ ID NO: 1502) |
| 656 | TK2 (SEQ ID NO: 79) | TTTAAAGATGGTGGAGA (SEQ ID NO: 1503) |
| 657 | TK2 (SEQ ID NO: 79) | GAATTACGGTGATGGT (SEQ ID NO: 1504) |
| 658 | TK2 (SEQ ID NO: 79) | GAATGAATTATGGTGATG (SEQ ID NO: 1505) |
| 659 | TK2 (SEQ ID NO: 79) | AGGTAATTGTCGATTAGA (SEQ ID NO: 1506) |
| 660 | TK2 (SEQ ID NO: 79) | AGGTAATTGTTGATTAGAT (SEQ ID NO: 1507) |
| 661 | TK2 (SEQ ID NO: 79) | GTGTGTTTTTCGTAAATA (SEQ ID NO: 1508) |
| 662 | TK2 (SEQ ID NO: 79) | GTGTGTTTTTTGTAAATAA (SEQ ID NO: 1509) |
| 663 | HSPB1 (SEQ ID NO: 80) | GTGTTACGGTAGGGTA (SEQ ID NO: 1510) |
| 664 | HSPB1 (SEQ ID NO: 80) | GTGTTATGGTAGGGTAT (SEQ ID NO: 1511) |
| 665 | HSPB1 (SEQ ID NO: 80) | AGTCGTGTTACGGTAG (SEQ ID NO: 1512) |
| 666 | HSPB1 (SEQ ID NO: 80) | AGTTGTGTTATGGTAGG (SEQ ID NO: 1513) |
| 667 | HSPB1 (SEQ ID NO: 80) | TTTTTTCGTAAAGGAAAG (SEQ ID NO: 1514) |
| 668 | HSPB1 (SEQ ID NO: 80) | TTTTTTTGTAAAGGAAAG (SEQ ID NO: 1515) |

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| 669 | TES (SEQ ID NO: 81) | TAGAAGTCGGTTCGTG (SEQ ID NO: 1516) |
| 670 | TES (SEQ ID NO: 81) | AGAAGTTGGTTTGTGG (SEQ ID NO: 1517) |
| 671 | TES (SEQ ID NO: 81) | GTTTCGTGGACGTTTAGA (SEQ ID NO: 1518) |
| 672 | TES (SEQ ID NO: 81) | GTTTGTGGATGTTTAGA (SEQ ID NO: 1519) |
| 673 | TES (SEQ ID NO: 81) | GATTGGGCGGCGGAAG (SEQ ID NO: 1520) |
| 674 | TES (SEQ ID NO: 81) | ATTGGGTGGTGGAAGT (SEQ ID NO: 1521) |
| 675 | TES (SEQ ID NO: 81) | TAGCGGAGTCGGAGGT (SEQ ID NO: 1522) |
| 676 | TES (SEQ ID NO: 81) | TAGTGGAGTTGGAGGT (SEQ ID NO: 1523) |
| 677 | TES (SEQ ID NO: 81) | AATTCGGTCGTGGGAT (SEQ ID NO: 1524) |
| 678 | TES (SEQ ID NO: 81) | AATTTGGTTGTGGGAT (SEQ ID NO: 1525) |
| 679 | SDC4 (SEQ ID NO: 82) | TTGCGGGTTATACGAT (SEQ ID NO: 1526) |
| 680 | SDC4 (SEQ ID NO: 82) | TTTGTGGGTTATATGATT (SEQ ID NO: 1527) |
| 681 | SDC4 (SEQ ID NO: 82) | GTGAATCGTGTTAAGAT (SEQ ID NO: 1528) |
| 682 | SDC4 (SEQ ID NO: 82) | TGTGAATTGTGTTAAGAT (SEQ ID NO: 1529) |
| 683 | PITX2 (SEQ ID NO: 83) | AGTCGGGAGAGCGAAA (SEQ ID NO: 1838) |
| 684 | PITX2 (SEQ ID NO: 83) | AGTTGGGAGAGTGAAA (SEQ ID NO: 1839) |
| 685 | PITX2 (SEQ ID NO: 83) | AAGAGTCGGGAGTCGGA (SEQ ID NO: 1840) |
| 686 | PITX2 (SEQ ID NO: 83) | AAGAGTTGGGAGTTGGA (SEQ ID NO: 1841) |
| 687 | PITX2 (SEQ ID NO: 83) | GGTCGAAGAGTCGGGA (SEQ ID NO: 1842) |
| 688 | PITX2 (SEQ ID NO: 83) | GGTTGAAGAGTTGGGA (SEQ ID NO: 1843) |
| 689 | PITX2 (SEQ ID NO: 83) | ATGTTAGCGGGTCGAA (SEQ ID NO: 1530) |
| 690 | PITX2 (SEQ ID NO: 83) | TAGTGGGTTGAAGAGT (SEQ ID NO: 1531) |
| 691 | GPR37 (SEQ ID NO: 84) | TTTCGATAGCGTTTGA (SEQ ID NO: 1532) |
| 692 | GPR37 (SEQ ID NO: 84) | TTTTGATAGTGTTTGATTT (SEQ ID NO: 1533) |
| 693 | GPR37 (SEQ ID NO: 84) | ATAGCGGAAGATCGGT (SEQ ID NO: 1534) |

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| 694 | GPR37 (SEQ ID NO: 84) | ATAGTGGAAGATTGGTT (SEQ ID NO: 1535) |
| 695 | GPR37 (SEQ ID NO: 84) | TAGCGGGGAATCGGAG (SEQ ID NO: 1536) |
| 696 | GPR37 (SEQ ID NO: 84) | TAGTGGGGAATTGGAG (SEQ ID NO: 1537) |
| 697 | GPR37 (SEQ ID NO: 84) | ATTTATTTTCGTTCCGGTA (SEQ ID NO: 1538) |
| 698 | GPR37 (SEQ ID NO: 84) | ATTTATTTTGTGTTGGGTA (SEQ ID NO: 1539) |
| 699 | GPR37 (SEQ ID NO: 84) | ATTCGGTAGTCGTAGT (SEQ ID NO: 1540) |
| 700 | GPR37 (SEQ ID NO: 84) | ATTTGGTAGTTGTAGTTT (SEQ ID NO: 1541) |
| 701 | FGF1 (SEQ ID NO: 85) | TATAGGTTTCGCGGATT (SEQ ID NO: 1542) |
| 702 | FGF1 (SEQ ID NO: 85) | TTATAGGTTTGTGGATTG (SEQ ID NO: 1543) |
| 703 | FGF1 (SEQ ID NO: 85) | ATTATTCGGGAATTTTGT (SEQ ID NO: 1544) |
| 704 | FGF1 (SEQ ID NO: 85) | TATTATTTGGGAATTTTGT (SEQ ID NO: 1545) |
| 705 | FGF1 (SEQ ID NO: 85) | AGTTTTGATCGAGAAGT (SEQ ID NO: 1546) |
| 706 | FGF1 (SEQ ID NO: 85) | TAGTTTTGATTGAGAAGT (SEQ ID NO: 1547) |
| 707 | FGF1 (SEQ ID NO: 85) | TAGTAACGGGGGTTAT (SEQ ID NO: 1548) |
| 708 | FGF1 (SEQ ID NO: 85) | TGTAGTAATGGGGGTT (SEQ ID NO: 1549) |
| 709 | FGF1 (SEQ ID NO: 85) | GATTTTTTCGGATGGTA (SEQ ID NO: 1550) |
| 710 | FGF1 (SEQ ID NO: 85) | ATTTTTTTGGATGGTATAG (SEQ ID NO: 1551) |
| 711 | GRIN2D (SEQ ID NO: 86) | GAGAGTCGGGATGATT (SEQ ID NO: 1552) |
| 712 | GRIN2D (SEQ ID NO: 86) | GGAGAGTTGGGATGAT (SEQ ID NO: 1553) |
| 713 | GRIN2D (SEQ ID NO: 86) | AGAGATTTTCGATTTGGA (SEQ ID NO: 1554) |
| 714 | GRIN2D (SEQ ID NO: 86) | AAGAGATTTTGATTTGGA (SEQ ID NO: 1555) |
| 715 | GRIN2D (SEQ ID NO: 86) | TAGGGTCGAGATTTGG (SEQ ID NO: 1556) |
| 716 | GRIN2D (SEQ ID NO: 86) | TTAGGGTTGAGATTTGG (SEQ ID NO: 1557) |
| 717 | GRIN2D (SEQ ID NO: 86) | AGTGTGGCGAATATTG (SEQ ID NO: 1558) |
| 718 | GRIN2D (SEQ ID NO: 86) | GTGTGGTGAATATTGAA (SEQ ID NO: 1559) |

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| 719 | CTSB (SEQ ID NO: 87) | TGGGATATTCGAGGAAT (SEQ ID NO: 1560) |
| 720 | CTSB (SEQ ID NO: 87) | GGATATTTGAGGAATTGA (SEQ ID NO: 1561) |
| 721 | CTSB (SEQ ID NO: 87) | TGATATGCGTTATGGTT (SEQ ID NO: 1562) |
| 722 | CTSB (SEQ ID NO: 87) | TTGATATGTGTTATGGTT (SEQ ID NO: 1563) |
| 723 | CTSD (SEQ ID NO: 88) | TAGAGGGCGAGCGGTA (SEQ ID NO: 1564) |
| 724 | CTSD (SEQ ID NO: 88) | TAGAGGGTGAGTGGTA (SEQ ID NO: 1565) |
| 725 | CTSD (SEQ ID NO: 88) | GGAGCGCGAAAGTTAT (SEQ ID NO: 1566) |
| 726 | CTSD (SEQ ID NO: 88) | TAGGGGAGTGTGAAAG (SEQ ID NO: 1567) |
| 727 | CTSD (SEQ ID NO: 88) | TAGGAGGTCGCGTAGG (SEQ ID NO: 1568) |
| 728 | CTSD (SEQ ID NO: 88) | TAGGAGGTTGTGTAGG (SEQ ID NO: 1569) |
| 729 | CTSD (SEQ ID NO: 88) | ATTCGTTTAGATTCGGG (SEQ ID NO: 1570) |
| 730 | CTSD (SEQ ID NO: 88) | ATTTGTTTAGATTTGGGG (SEQ ID NO: 1571) |
| 731 | PLAUR (SEQ ID NO: 89) | GGTATAGCGGGAAGT (SEQ ID NO: 1572) |
| 732 | PLAUR (SEQ ID NO: 89) | GGTATAGTGGGAAGTAA (SEQ ID NO: 1573) |
| 733 | PLAUR (SEQ ID NO: 89) | ATTTATATTTATCGTTAAAGT (SEQ ID NO: 1574) |
| 734 | PLAUR (SEQ ID NO: 89) | TATATTTATTGTAAAGTTTTT (SEQ ID NO: 1575) |
| 735 | PLAUR (SEQ ID NO: 89) | AGAGCGATTGTTTCGGG (SEQ ID NO: 1576) |
| 736 | PLAUR (SEQ ID NO: 89) | AGAGTGATTGTTTTGGG (SEQ ID NO: 1577) |
| 737 | PLAUR (SEQ ID NO: 89) | GGGTTTTACGTTAGGA (SEQ ID NO: 1578) |
| 738 | PLAUR (SEQ ID NO: 89) | GGGTTTTATGTTAGGAA (SEQ ID NO: 1579) |
| 739 | PSA (SEQ ID NO: 90) | TTTCGATTCGGTTTAGA (SEQ ID NO: 1824) |
| 740 | PSA (SEQ ID NO: 90) | AATTGTTTTGATTTGGTT (SEQ ID NO: 1825) |
| 741 | PSA (SEQ ID NO: 90) | TAATGGGGCGTCGATT (SEQ ID NO: 1826) |
| 742 | PSA (SEQ ID NO: 90) | TTAATGGGGTGTTGATT (SEQ ID NO: 1827) |
| 743 | PSA (SEQ ID NO: 90) | TATCGTAGCGGTTAGG (SEQ ID NO: 1828) |

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| 744 | PSA (SEQ ID NO: 90) | TATTGTAGTGGTTAGGAA (SEQ ID NO: 1829) |
| 745 | PSA (SEQ ID NO: 90) | AGGAACGTTAGTCGTT (SEQ ID NO: 1830) |
| 746 | PSA (SEQ ID NO: 90) | TAGGAATGTTAGTTGTTT (SEQ ID NO: 1831) |
| 747 | PSA (SEQ ID NO: 90) | GGTCGTCGTATTATGGA (SEQ ID NO: 1832) |
| 748 | PSA (SEQ ID NO: 90) | TGGTTGTTGTATTATGGA (SEQ ID NO: 1833) |
| 749 | CGA (SEQ ID NO: 91) | ATATTTATTTTCGGAAATTT (SEQ ID NO: 1580) |
| 750 | CGA (SEQ ID NO: 91) | TTATTTTGGAAATTTATAGT (SEQ ID NO: 1581) |
| 751 | CGA (SEQ ID NO: 91) | TGATTTTGTTCGTTATTATT (SEQ ID NO: 1582) |
| 752 | CGA (SEQ ID NO: 91) | TTGATTTTGTGTTATTATT (SEQ ID NO: 1583) |
| 753 | CGA (SEQ ID NO: 91) | TAAATTGACGTTATGGTA (SEQ ID NO: 1834) |
| 754 | CGA (SEQ ID NO: 91) | AAATTGATGTTATGGTAAA (SEQ ID NO: 1835) |
| 755 | CGA (SEQ ID NO: 91) | AATTGACGTTATGGTAAT (SEQ ID NO: 1836) |
| 756 | CGA (SEQ ID NO: 91) | TAAAAATTGATGTTATGGT (SEQ ID NO: 1837) |
| 757 | CYP2D6 (SEQ ID NO: 92) | AAGTAGCGGTAAGGAT (SEQ ID NO: 1584) |
| 758 | CYP2D6 (SEQ ID NO: 92) | GAAGTAGTGGTAAGGAT (SEQ ID NO: 1585) |
| 759 | CYP2D6 (SEQ ID NO: 92) | TAGAGGGCGAAGGTTA (SEQ ID NO: 1586) |
| 760 | CYP2D6 (SEQ ID NO: 92) | AGAGGGTGAAGGTTAT (SEQ ID NO: 1587) |
| 761 | CYP2D6 (SEQ ID NO: 92) | TGTATCGGTATTAACGTT (SEQ ID NO: 1588) |
| 762 | CYP2D6 (SEQ ID NO: 92) | TGTATTGGTATTAATGTTG (SEQ ID NO: 1589) |
| 763 | CYP2D6 (SEQ ID NO: 92) | GTACGTTATTCGTTAGG (SEQ ID NO: 1590) |
| 764 | CYP2D6 (SEQ ID NO: 92) | TGTATGTTATTTGTTAGGT (SEQ ID NO: 1591) |
| 765 | CYP3A4 (SEQ ID NO: 93) | AAAAGAGTCGTATAGAGA (SEQ ID NO: 1592) |
| 766 | CYP3A4 (SEQ ID NO: 93) | AAGAGTTGTATAGAGAGG (SEQ ID NO: 1593) |
| 767 | CYP3A4 (SEQ ID NO: 93) | GTGTGTCGGGAGTTATA (SEQ ID NO: 1594) |
| 768 | CYP3A4 (SEQ ID NO: 93) | GTGTGTTGGGAGTTATA (SEQ ID NO: 1595) |

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| 769 | CYP3A4 (SEQ ID NO: 93) | AAATAGGCGATGTTTAA (SEQ ID NO: 1596) |
| 770 | CYP3A4 (SEQ ID NO: 93) | TAGAAATAGGTGATGTTT (SEQ ID NO: 1597) |
| 771 | CYP3A4 (SEQ ID NO: 93) | TAAAATTATAGCGTTTTTAA (SEQ ID NO: 1598) |
| 772 | CYP3A4 (SEQ ID NO: 93) | AAATTATAGTGTTTTTAAAAT (SEQ ID NO: 1599) |
| 773 | TK1 (SEQ ID NO: 94) | AGGAATTCGGTACGTG (SEQ ID NO: 1600) |
| 774 | TK1 (SEQ ID NO: 94) | GAGGAATTTGGTATGTG (SEQ ID NO: 1601) |
| 775 | TK1 (SEQ ID NO: 94) | AATTACGAGTCGGTTT (SEQ ID NO: 1602) |
| 776 | TK1 (SEQ ID NO: 94) | GGTTAATTATGAGTTGGT (SEQ ID NO: 1603) |
| 777 | TK1 (SEQ ID NO: 94) | AGGTCGTTTCGTAGTA (SEQ ID NO: 1604) |
| 778 | TK1 (SEQ ID NO: 94) | TTAAGGTTGTTTTGTAGT (SEQ ID NO: 1605) |
| 779 | TK1 (SEQ ID NO: 94) | TTTCGGGAAGTTTACGAA (SEQ ID NO: 1606) |
| 780 | TK1 (SEQ ID NO: 94) | TTTTGGGAAGTTTATGAA (SEQ ID NO: 1607) |
| 781 | RENB (SEQ ID NO: 95) | TAGATTTTTCGGTTATTTT (SEQ ID NO: 1608) |
| 782 | RENB (SEQ ID NO: 95) | TTTAGATTTTTCGGTTATTT (SEQ ID NO: 1609) |
| 783 | RENB (SEQ ID NO: 95) | GGTTTATTCGAGTGGA (SEQ ID NO: 1610) |
| 784 | RENB (SEQ ID NO: 95) | TGGTTTATTTGAGTGGA (SEQ ID NO: 1611) |
| 785 | RENB (SEQ ID NO: 95) | TAAAGTTTCGTTTTAGGT (SEQ ID NO: 1612) |
| 786 | RENB (SEQ ID NO: 95) | TTAAAGTTTGTGTTTAGGT (SEQ ID NO: 1613) |
| 787 | RENB (SEQ ID NO: 95) | GGGATCGCGATTAATT (SEQ ID NO: 1614) |
| 788 | RENB (SEQ ID NO: 95) | GGGATTGTGATTAATTTTG (SEQ ID NO: 1615) |
| 789 | F12 (SEQ ID NO: 96) | TGGATTAACGGACGGA (SEQ ID NO: 1616) |
| 790 | F12 (SEQ ID NO: 96) | TTGGATTAATGGATGGA (SEQ ID NO: 1617) |
| 791 | F12 (SEQ ID NO: 96) | GGACGGACGTTATGAG (SEQ ID NO: 1618) |
| 792 | F12 (SEQ ID NO: 96) | GGATGGATGTTATGAGG (SEQ ID NO: 1619) |
| 793 | F12 (SEQ ID NO: 96) | ATATTTTCGGTGAGTGT (SEQ ID NO: 1620) |

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| 794 | F12 (SEQ ID NO: 96) | AATATTTTTGGTGAGTGT (SEQ ID NO: 1621) |
| 795 | F12 (SEQ ID NO: 96) | GGGGGGTCGTTATTATA (SEQ ID NO: 1622) |
| 796 | F12 (SEQ ID NO: 96) | GGGGGGTTGTTATTATA (SEQ ID NO: 1623) |
| 797 | F12 (SEQ ID NO: 96) | GTTAGTTCGGAAGGTT (SEQ ID NO: 1624) |
| 798 | F12 (SEQ ID NO: 96) | GGTTAGTTTGAAGGT (SEQ ID NO: 1625) |
| 799 | REN (SEQ ID NO: 97) | TTATTGCGGGATAGAG (SEQ ID NO: 1626) |
| 800 | REN (SEQ ID NO: 97) | TTATTGTGGGATAGAGT (SEQ ID NO: 1627) |
| 801 | REN (SEQ ID NO: 97) | TTTTTAGCGAGGTATTT (SEQ ID NO: 1628) |
| 802 | REN (SEQ ID NO: 97) | AGTTTTTAGTGAGGTATT (SEQ ID NO: 1629) |
| 803 | REN (SEQ ID NO: 97) | GTTTGTCGGGAGATTA (SEQ ID NO: 1630) |
| 804 | REN (SEQ ID NO: 97) | TGTTTGTTGGGAGATTA (SEQ ID NO: 1631) |
| 805 | REN (SEQ ID NO: 97) | TAATTATCGTTTAAAGGTG (SEQ ID NO: 1632) |
| 806 | REN (SEQ ID NO: 97) | TTAATTATTGTTTAAAGGTG (SEQ ID NO: 1633) |
| 807 | EBAG9 (SEQ ID NO: 98) | GTTTGACGTCGAGATT (SEQ ID NO: 1634) |
| 808 | EBAG9 (SEQ ID NO: 98) | TGATGTTGAGATTGGG (SEQ ID NO: 1635) |
| 809 | EBAG9 (SEQ ID NO: 98) | TTATCGGGAAATTCGTT (SEQ ID NO: 1636) |
| 810 | EBAG9 (SEQ ID NO: 98) | TTTTATTGGGAAATTTGTT (SEQ ID NO: 1637) |
| 811 | EBAG9 (SEQ ID NO: 98) | ATTTTTAGTTTCGTTTATTT (SEQ ID NO: 1638) |
| 812 | EBAG9 (SEQ ID NO: 98) | TTTAGTTTTGTTTATTAAAG (SEQ ID NO: 1639) |
| 813 | MSMB (SEQ ID NO: 99) | ATTGGTATCGTTGAGG (SEQ ID NO: 1640) |
| 814 | MSMB (SEQ ID NO: 99) | ATTGGTATTGTTGAGGT (SEQ ID NO: 1641) |
| 815 | MSMB (SEQ ID NO: 99) | TGTATAAAATCGAATAAGG (SEQ ID NO: 1642) |
| 816 | MSMB (SEQ ID NO: 99) | TGTATAAAATTGAATAAGGA (SEQ ID NO: 1643) |
| 817 | MSMB (SEQ ID NO: 99) | ATAGGGCGAAGGTTTA (SEQ ID NO: 1644) |
| 818 | MSMB (SEQ ID NO: 99) | ATAGGGTGAAGGTTTAG (SEQ ID NO: 1645) |

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| 819 | X15323 angiotensinogen gene 5'-region and exon 1 (SEQ ID NO: 100) | TAGTTTCGGGAGATGT (SEQ ID NO: 1646) |
| 820 | X15323 angiotensinogen gene 5'-region and exon 1 (SEQ ID NO: 100) | TTAGTTTTGGGAGATGT (SEQ ID NO: 1647) |
| 821 | X15323 angiotensinogen gene 5'-region and exon 1 (SEQ ID NO: 100) | TAGGAGTCGGGGTTAA (SEQ ID NO: 1648) |
| 822 | X15323 angiotensinogen gene 5'-region and exon 1 (SEQ ID NO: 100) | TAGGAGTTGGGGTTAA (SEQ ID NO: 1649) |
| 823 | X15323 angiotensinogen gene 5'-region and exon 1 (SEQ ID NO: 100) | AGTGAGTCGGTGTAGG (SEQ ID NO: 1650) |
| 824 | X15323 angiotensinogen gene 5'-region and exon 1 (SEQ ID NO: 100) | GAGTGAGTTGGTGTAG (SEQ ID NO: 1651) |
| 825 | X15323 angiotensinogen gene 5'-region and exon 1 (SEQ ID NO: 100) | GAAGCGATATTACGTT (SEQ ID NO: 1652) |
| 826 | X15323 angiotensinogen gene 5'-region and exon 1 (SEQ ID NO: 100) | AGAAGTGATATTTATGTTG (SEQ ID NO: 1653) |
| 827 | ZNF147 (SEQ ID NO: 101) | TAGGTAACGTATAGAGAT (SEQ ID NO: 1654) |
| 828 | ZNF147 (SEQ ID NO: 101) | TTAGGTAATGTATAGAGA (SEQ ID NO: 1655) |
| 829 | ZNF147 (SEQ ID NO: 101) | AGGAGTGTCGTATTTTA (SEQ ID NO: 1656) |
| 830 | ZNF147 (SEQ ID NO: 101) | AGGAGTGTTGTATTTTAG (SEQ ID NO: 1657) |
| 831 | ZNF147 (SEQ ID NO: 101) | AGGTTAGCGATTTTGA (SEQ ID NO: 1658) |
| 832 | ZNF147 (SEQ ID NO: 101) | AGGTTAGTGATTTTGAG (SEQ ID NO: 1659) |

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| | NO: 101) | |
| 833 | EBBP (SEQ ID NO: 102) | TTTAGGTCGTTTTTATTTAT (SEQ ID NO: 1660) |
| 834 | EBBP (SEQ ID NO: 102) | TTTAGGTTGTTTTTATTTATA (SEQ ID NO: 1661) |
| 835 | EBBP (SEQ ID NO: 102) | ATGGTATCGAGTCGTT (SEQ ID NO: 1662) |
| 836 | EBBP (SEQ ID NO: 102) | TGGTATTGAGTTGTTTAT (SEQ ID NO: 1663) |
| 837 | EBBP (SEQ ID NO: 102) | GGAATGTTTCGTTAAGT (SEQ ID NO: 1664) |
| 838 | EBBP (SEQ ID NO: 102) | ATGTTTTGTTAAGTGGG (SEQ ID NO: 1665) |
| 839 | EBBP (SEQ ID NO: 102) | TTACGAGTGTGACGGA (SEQ ID NO: 1666) |
| 840 | EBBP (SEQ ID NO: 102) | TTATGAGTGTGATGGAT (SEQ ID NO: 1667) |
| 841 | CALR (SEQ ID NO: 103) | TGTTTTTACGTTGTAGAA (SEQ ID NO: 1668) |
| 842 | CALR (SEQ ID NO: 103) | GTTTTTATGTTGTAGAAAG (SEQ ID NO: 1669) |
| 843 | CALR (SEQ ID NO: 103) | AGAGGTACGTGATTGG (SEQ ID NO: 1670) |
| 844 | CALR (SEQ ID NO: 103) | TAGAGGTATGTGATTGG (SEQ ID NO: 1671) |
| 845 | CALR (SEQ ID NO: 103) | TTTTTTAATCGGTAAATGA (SEQ ID NO: 1672) |
| 846 | CALR (SEQ ID NO: 103) | TTTTTTAATTGGTAAATGAA (SEQ ID NO: 1673) |
| 847 | CALR (SEQ ID NO: 103) | AGATTGTAGTCGTTTTTT (SEQ ID NO: 1674) |
| 848 | CALR (SEQ ID NO: 103) | AGATTGTAGTTGTTTTTTT (SEQ ID NO: 1675) |
| 849 | CALR (SEQ ID NO: 103) | AGGTTTAACGATGTGAT (SEQ ID NO: 1676) |
| 850 | CALR (SEQ ID NO: 103) | AGGTTTAATGATGTGATT (SEQ ID NO: 1677) |
| 851 | BCAR1 (SEQ ID NO: 104) | AGTTTTTCGATTTAGCGTT (SEQ ID NO: 1678) |
| 852 | BCAR1 (SEQ ID NO: 104) | AGTTTTTGATTAGTGTTT (SEQ ID NO: 1679) |
| 853 | BCAR1 (SEQ ID NO: 104) | TGGCGAGTTTTTCGATTTA (SEQ ID NO: 1680) |
| 854 | BCAR1 (SEQ ID NO: 104) | TGGTGAGTTTTTGATTTA (SEQ ID NO: 1681) |
| 855 | BCAR1 (SEQ ID NO: 104) | FTTCGATTGTAGACGGT (SEQ ID NO: 1682) |
| 856 | BCAR1 (SEQ ID NO: 104) | TTTTGATTGTAGATGGTT (SEQ ID NO: 1683) |
| 857 | BCAR1 (SEQ ID NO: 104) | ATTTATCGCGTGTTTAT (SEQ ID NO: 1684) |

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| | NO: 104) | |
| 858 | BCAR1 (SEQ ID NO: 104) | GGTATTTATTGTGTGTTTA (SEQ ID NO: 1685) |
| 859 | COX7A2L (SEQ ID NO: 105) | TTGTTCTGAAGATCGTT (SEQ ID NO: 1686) |
| 860 | COX7A2L (SEQ ID NO: 105) | GTTGTTTGAAGATTGTTT (SEQ ID NO: 1687) |
| 861 | COX7A2L (SEQ ID NO: 105) | TAGCGTAAGGATTCGGT (SEQ ID NO: 1688) |
| 862 | COX7A2L (SEQ ID NO: 105) | TTAGTGTAAGGATTGTTT (SEQ ID NO: 1689) |
| 863 | COX7A2L (SEQ ID NO: 105) | AGAGTTCGGTTTTTCGTA (SEQ ID NO: 1690) |
| 864 | COX7A2L (SEQ ID NO: 105) | AGAGTTTGGTTTTTTGTA (SEQ ID NO: 1691) |
| 865 | COX7A2L (SEQ ID NO: 105) | ATTCGTATTTGCGGGTTA (SEQ ID NO: 1692) |
| 866 | COX7A2L (SEQ ID NO: 105) | ATTTGTATTTGTGGGTTA (SEQ ID NO: 1693) |
| 867 | AF174646 glandular kallikrein gene, promoter region and partial sequence (SEQ ID NO: 106) | GTTCGTATAGCGTAGAT (SEQ ID NO: 1694) |
| 868 | AF174646 glandular kallikrein gene, promoter region and partial sequence (SEQ ID NO: 106) | GTTTGTATAGTGTAGATGT (SEQ ID NO: 1695) |
| 869 | AF174646 glandular kallikrein gene, promoter region and partial sequence (SEQ ID NO: 106) | AGAGGCGCGTTGTAGG (SEQ ID NO: 1696) |
| 870 | AF174646 glandular kallikrein gene, promoter region and partial sequence (SEQ ID NO: 106) | AGAGGTGTGTTGTAGG (SEQ ID NO: 1697) |
| 871 | AF174646 glandular kallikrein gene, | TTGGGACGTGACGGGA (SEQ ID NO: 1698) |

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| | promoter region and partial sequence (SEQ ID NO: 106) | |
| 872 | AF174646 glandular kallikrein gene, promoter region and partial sequence (SEQ ID NO: 106) | TTGGGATGTGATGGGA (SEQ ID NO: 1699) |
| 873 | AF174646 glandular kallikrein gene, promoter region and partial sequence (SEQ ID NO: 106) | TAGGGGACGTACGTTT (SEQ ID NO: 1700) |
| 874 | AF174646 glandular kallikrein gene, promoter region and partial sequence (SEQ ID NO: 106) | TATTAGGGGATGTATGTT (SEQ ID NO: 1701) |
| 875 | KLK3 (SEQ ID NO: 107) | AATCGGGGATCGTATT (SEQ ID NO: 1702) |
| 876 | KLK3 (SEQ ID NO: 107) | AGAATTGGGGATTGTAT (SEQ ID NO: 1703) |
| 877 | KLK3 (SEQ ID NO: 107) | ATTTGTATTCGGAGAGT (SEQ ID NO: 1704) |
| 878 | KLK3 (SEQ ID NO: 107) | TGTATTTGGAGAGTTGT (SEQ ID NO: 1705) |
| 879 | AKR1B1 (SEQ ID NO: 108) | GTTTCGCGTGGTAGAA (SEQ ID NO: 1706) |
| 880 | AKR1B1 (SEQ ID NO: 108) | GTTTTGTGTGGTAGAAA (SEQ ID NO: 1707) |
| 881 | AKR1B1 (SEQ ID NO: 108) | GTTGCGCGAAGGAGTT (SEQ ID NO: 1708) |
| 882 | AKR1B1 (SEQ ID NO: 108) | GTTGTGTGAAGGAGTT (SEQ ID NO: 1709) |
| 883 | AKR1B1 (SEQ ID NO: 108) | AGTTCGTGAGGTCGGTA (SEQ ID NO: 1710) |
| 884 | AKR1B1 (SEQ ID NO: 108) | AGTTTGTGAGGTTGGTA (SEQ ID NO: 1711) |
| 885 | AKR1B1 (SEQ ID NO: 108) | ATTTTCGTTTAGTACGGT (SEQ ID NO: 1712) |
| 886 | AKR1B1 (SEQ ID NO: 108) | GATTTTGTTTAGTATGGT (SEQ ID NO: 1713) |
| 887 | TGM4 (SEQ ID | TAATAAAATTCGGAATTTT (SEQ ID NO: 1714) |

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| | NO: 109) | |
| 888 | TGM4 (SEQ ID NO: 109) | TAATAAAATTTTGAATTTT (SEQ ID NO: 1715) |
| 889 | TGM4 (SEQ ID NO: 109) | GGAAGGCGATGTTGAT (SEQ ID NO: 1716) |
| 890 | TGM4 (SEQ ID NO: 109) | GGAAGGTGATGTTGAT (SEQ ID NO: 1717) |
| 891 | TGM4 (SEQ ID NO: 109) | ATATAGTCGGTTTTTAGG (SEQ ID NO: 1718) |
| 892 | TGM4 (SEQ ID NO: 109) | TATAGTTGGTTTTAGGG (SEQ ID NO: 1719) |
| 893 | TGM4 (SEQ ID NO: 109) | AGGTATTCGGTAGAGG (SEQ ID NO: 1720) |
| 894 | TGM4 (SEQ ID NO: 109) | AGGTATTTGGTAGAGGT (SEQ ID NO: 1721) |
| 895 | AR (SEQ ID NO: 110) | AAGAGGCGAAAAGTAG (SEQ ID NO: 1722) |
| 896 | AR (SEQ ID NO: 110) | AAGAGGTGAAAAGTAGT (SEQ ID NO: 1723) |
| 897 | AR (SEQ ID NO: 110) | AGTAAGCGGTTGTATAT (SEQ ID NO: 1724) |
| 898 | AR (SEQ ID NO: 110) | AAAAGTAAGTGGTTGTAT (SEQ ID NO: 1725) |
| 899 | AR (SEQ ID NO: 110) | AAATTGAGCGTTTATGT (SEQ ID NO: 1726) |
| 900 | AR (SEQ ID NO: 110) | ATTGAGTGTTTATGTGTA (SEQ ID NO: 1727) |
| 901 | HSPA1A (SEQ ID NO: 111) | AGGCGTCGGGAGATTA (SEQ ID NO: 1728) |
| 902 | HSPA1A (SEQ ID NO: 111) | AGGTGTTGGGAGATTA (SEQ ID NO: 1729) |
| 903 | HSPA1A (SEQ ID NO: 111) | TTGCGTAATTTGGACGTT (SEQ ID NO: 1730) |
| 904 | HSPA1A (SEQ ID NO: 111) | TTGTGTAATTTGGATGTT (SEQ ID NO: 1731) |
| 905 | HSPA1A (SEQ ID NO: 111) | GTTCGGTTACGTTATAAT (SEQ ID NO: 1732) |
| 906 | HSPA1A (SEQ ID NO: 111) | GTTTGGTTATGTTATAATGG (SEQ ID NO: 1733) |
| 907 | HSPA1A (SEQ ID NO: 111) | TTGATATCGTTCGGTTA (SEQ ID NO: 1734) |
| 908 | HSPA1A (SEQ ID NO: 111) | TGTTGATATTGTTTGGTTA (SEQ ID NO: 1735) |
| 909 | HSPA1A (SEQ ID NO: 111) | ATGGCGATGTTGATCGTT (SEQ ID NO: 1736) |
| 910 | HSPA1A (SEQ ID NO: 111) | ATGGTGATGTTGATTGTT (SEQ ID NO: 1737) |
| 911 | FKBP4 (SEQ ID NO: 112) | TTTATATTCGTCGTAGG (SEQ ID NO: 1738) |
| 912 | FKBP4 (SEQ ID NO: 112) | TTTTTATATTTTGTGTAGG (SEQ ID NO: 1739) |

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| | NO: 112) | |
| 913 | FKBP4 (SEQ ID NO: 112) | ATGTCGGGAGATCGAT (SEQ ID NO: 1740) |
| 914 | FKBP4 (SEQ ID NO: 112) | GATGTTGGGAGATTGAT (SEQ ID NO: 1741) |
| 915 | FKBP4 (SEQ ID NO: 112) | AGGTCGTCGGGGAGAT (SEQ ID NO: 1742) |
| 916 | FKBP4 (SEQ ID NO: 112) | AGGTTGTTGGGGAGAT (SEQ ID NO: 1743) |
| 917 | FKBP4 (SEQ ID NO: 112) | AGATTTCGAGTTCGAG (SEQ ID NO: 1744) |
| 918 | FKBP4 (SEQ ID NO: 112) | ATTTTGAGTTTGAGGGT (SEQ ID NO: 1745) |
| 919 | ESR2 (SEQ ID NO: 113) | ATTTGAGGATTACGTT (SEQ ID NO: 1746) |
| 920 | ESR2 (SEQ ID NO: 113) | ATTTTGAGGATTATGTTTT (SEQ ID NO: 1747) |
| 921 | ESR2 (SEQ ID NO: 113) | AGATGGCGTTTTTCGTA (SEQ ID NO: 1748) |
| 922 | ESR2 (SEQ ID NO: 113) | TAGATGGTGTTTTTTGTA (SEQ ID NO: 1749) |
| 923 | ESR2 (SEQ ID NO: 113) | ATTTTCGAATCGATTTTT (SEQ ID NO: 1750) |
| 924 | ESR2 (SEQ ID NO: 113) | GGAGTATTTTTGAATTGAT (SEQ ID NO: 1751) |
| 925 | ESR2 (SEQ ID NO: 113) | AGTTCGACGGTTTTAG (SEQ ID NO: 1752) |
| 926 | ESR2 (SEQ ID NO: 113) | AGGGAGTTTGATGGTT (SEQ ID NO: 1753) |
| 927 | ESR2 (SEQ ID NO: 113) | AGTTTACGTGATCGAG (SEQ ID NO: 1754) |
| 928 | ESR2 (SEQ ID NO: 113) | AGTTTATGTGATTGAGTT (SEQ ID NO: 1755) |
| 929 | IGF1 (SEQ ID NO: 114) | AGATTATGTCGAGTTGT (SEQ ID NO: 1756) |
| 930 | IGF1 (SEQ ID NO: 114) | AAGATTATGTTGAGTTGT (SEQ ID NO: 1757) |
| 931 | IGF1 (SEQ ID NO: 114) | TAGTATTCGGGTGATTT (SEQ ID NO: 1758) |
| 932 | IGF1 (SEQ ID NO: 114) | AGATAGTATTTGGGTGAT (SEQ ID NO: 1759) |
| 933 | IGF1 (SEQ ID NO: 114) | AGAAAGGACGATAAGAT (SEQ ID NO: 1760) |
| 934 | IGF1 (SEQ ID NO: 114) | AGAAAGGATGATAAGATT (SEQ ID NO: 1761) |
| 935 | VTN (SEQ ID NO: 115) | GGTGGTATCGATTGAT (SEQ ID NO: 1762) |
| 936 | VTN (SEQ ID NO: 115) | TGGTGGTATTGATTGAT (SEQ ID NO: 1763) |
| 937 | VTN (SEQ ID NO: 115) | TAGTGATTCGCGGGGA (SEQ ID NO: 1764) |

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| | NO: 115) | |
| 938 | VTN (SEQ ID NO: 115) | TAGTGATTTGTGGGGA (SEQ ID NO: 1765) |
| 939 | VTN (SEQ ID NO: 115) | TTATGTCGGAGGATGA (SEQ ID NO: 1766) |
| 940 | VTN (SEQ ID NO: 115) | ATTATGTTGGAGGATGA (SEQ ID NO: 1767) |
| 941 | VTN (SEQ ID NO: 115) | ATACGGTTTATGACGAT (SEQ ID NO: 1768) |
| 942 | VTN (SEQ ID NO: 115) | ATATGGTTTATGATGATGG (SEQ ID NO: 1769) |
| 943 | CTSL (SEQ ID NO: 116) | GGGTCGGGTGGACGAA (SEQ ID NO: 1770) |
| 944 | CTSL (SEQ ID NO: 116) | GGGTTGGGTGGATGAA (SEQ ID NO: 1771) |
| 945 | CTSL (SEQ ID NO: 116) | TAAACGTGGGGTCGGG (SEQ ID NO: 1772) |
| 946 | CTSL (SEQ ID NO: 116) | TAAATGTGGGGTTGGG (SEQ ID NO: 1773) |
| 947 | CTSL (SEQ ID NO: 116) | GAGCGTTCGAGTTAAT (SEQ ID NO: 1774) |
| 948 | CTSL (SEQ ID NO: 116) | TTGGAGTGTTTGAGTTA (SEQ ID NO: 1775) |
| 949 | TGFB3 (SEQ ID NO: 117) | AGGACGAAGAAGCGGA (SEQ ID NO: 1776) |
| 950 | TGFB3 (SEQ ID NO: 117) | AGGATGAAGAAGTGGA (SEQ ID NO: 1777) |
| 951 | TGFB3 (SEQ ID NO: 117) | TAGGAAGCGTTGGTAA (SEQ ID NO: 1778) |
| 952 | TGFB3 (SEQ ID NO: 117) | TTAGGAAGTGTTGGTA (SEQ ID NO: 1779) |
| 953 | TGFB3 (SEQ ID NO: 117) | TAGTAGACGTGTAGAAG (SEQ ID NO: 1780) |
| 954 | TGFB3 (SEQ ID NO: 117) | AGTAGATGTGTAGAAGG (SEQ ID NO: 1781) |
| 955 | TGFB3 (SEQ ID NO: 117) | AGGTTGATCGTGGTAA (SEQ ID NO: 1782) |
| 956 | TGFB3 (SEQ ID NO: 117) | AGGTTGATTGTGGTAAA (SEQ ID NO: 1783) |
| 957 | MAPKAPK5 (SEQ ID NO: 118) | AGTAGTCGTTTTTCGGGA (SEQ ID NO: 1784) |
| 958 | MAPKAPK5 (SEQ ID NO: 118) | AGTAGTTGTTTTTTGGGA (SEQ ID NO: 1785) |
| 959 | MAPKAPK5 (SEQ ID NO: 118) | AATTCGGTAGTCGATG (SEQ ID NO: 1786) |
| 960 | MAPKAPK5 (SEQ ID NO: 118) | ATTTGGTAGTTGATGGA (SEQ ID NO: 1787) |

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| | 118) | |
| 961 | MAPKAPK5 (SEQ ID NO: 118) | ATTCGGGGGAGGTCGAA (SEQ ID NO: 1788) |
| 962 | MAPKAPK5 (SEQ ID NO: 118) | ATTTGGGGGAGGTTGAA (SEQ ID NO: 1789) |
| 963 | MAPKAPK5 (SEQ ID NO: 118) | ATTTACGGAATTCGGG (SEQ ID NO: 1790) |
| 964 | MAPKAPK5 (SEQ ID NO: 118) | TTATGGAATTTGGGGG (SEQ ID NO: 1791) |
| 965 | PCAF (SEQ ID NO: 119) | GAGCGGTAGGTGTCGAA (SEQ ID NO: 1792) |
| 966 | PCAF (SEQ ID NO: 119) | GAGTGGTAGGTGTTGAA (SEQ ID NO: 1793) |
| 967 | PCAF (SEQ ID NO: 119) | TAAGATTTTCGCGGGTA (SEQ ID NO: 1794) |
| 968 | PCAF (SEQ ID NO: 119) | TGTAAGATTTTGTGGGTA (SEQ ID NO: 1795) |
| 969 | PCAF (SEQ ID NO: 119) | AGTTCGTAGTTTCGAG (SEQ ID NO: 1796) |
| 970 | PCAF (SEQ ID NO: 119) | GTTTGTAGTTTGTAGGA (SEQ ID NO: 1797) |
| 971 | PCAF (SEQ ID NO: 119) | TAGGGCGCGGAGTAGA (SEQ ID NO: 1798) |
| 972 | PCAF (SEQ ID NO: 119) | TAGGGTGTGGAGTAGA (SEQ ID NO: 1799) |
| 973 | NCOA3 (SEQ ID NO: 120) | GATGATATTTTCGGGATTA (SEQ ID NO: 1800) |
| 974 | NCOA3 (SEQ ID NO: 120) | GATGATATTTTGGGATTAA (SEQ ID NO: 1801) |
| 975 | NCOA3 (SEQ ID NO: 120) | ATAGTTTCGTGGTTTTCGAT (SEQ ID NO: 1802) |
| 976 | NCOA3 (SEQ ID NO: 120) | ATAGTTTTGTGGTTTTTGAT (SEQ ID NO: 1803) |
| 977 | NCOA3 (SEQ ID NO: 120) | TTTAGTTCGTTTATTTGAA (SEQ ID NO: 1804) |
| 978 | NCOA3 (SEQ ID NO: 120) | TTTAGTTTGTTTATTTGAAA (SEQ ID NO: 1805) |
| 979 | NCOA3 (SEQ ID NO: 120) | AGGATTCGTGTTTGGTA (SEQ ID NO: 1806) |
| 980 | NCOA3 (SEQ ID NO: 120) | AGGATTTGTGTTTGGTA (SEQ ID NO: 1807) |
| 981 | PRKCD (SEQ ID NO: 121) | ATTTATTTTTCGTTGTAGG (SEQ ID NO: 1808) |
| 982 | PRKCD (SEQ ID NO: 121) | TATTTATTTTGTGTTGTAGG (SEQ ID NO: 1809) |
| 983 | PRKCD (SEQ ID | TTTCGGAAACGGGAAT (SEQ ID NO: 1810) |

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| | NO: 121) | |
| 984 | PRKCD (SEQ ID NO: 121) | TAGTTTTGGAAATGGGA (SEQ ID NO: 1811) |
| 985 | PRKCD (SEQ ID NO: 121) | GGACGGAGTTATCGGT (SEQ ID NO: 1812) |
| 986 | PRKCD (SEQ ID NO: 121) | GGATGGAGTTATTGGTA (SEQ ID NO: 1813) |
| 987 | PRKCD (SEQ ID NO: 121) | GTTTAGCGGAGGGATA (SEQ ID NO: 1814) |
| 988 | PRKCD (SEQ ID NO: 121) | TGTTTAGTGGAGGGAT (SEQ ID NO: 1815) |

Table 3: Hybridisation oligonucleotides according to Examples 3 and 4.

| No: | Gene | Oligo: |
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| 1 | STMN1 (SEQ ID NO: 27) | GTTATCGGTTTCGGGAATT (SEQ ID NO: 1816) |
| 2 | STMN1 (SEQ ID NO: 27) | GTTATTGGTTTGGGAATT (SEQ ID NO: 1817) |
| 3 | STMN1 (SEQ ID NO: 27) | GTTATCGGTTTCGGGAATT (SEQ ID NO: 1816) |
| 4 | STMN1 (SEQ ID NO: 27) | GTTATTGGTTTGGGAATT (SEQ ID NO: 1817) |
| 5 | STMN1 (SEQ ID NO: 27) | GTAAGAACGTATATAGTGAG (SEQ ID NO: 1818) |
| 6 | STMN1 (SEQ ID NO: 27) | GTAAGAATGTATATAGTGAG (SEQ ID NO: 1819) |
| 7 | STMN1 (SEQ ID NO: 27) | GTAAGAACGTATATAGTGAG (SEQ ID NO: 1818) |
| 8 | STMN1 (SEQ ID NO: 27) | GTAAGAATGTATATAGTGAG (SEQ ID NO: 1819) |
| 9 | STMN1 (SEQ ID NO: 27) | AGAAATTACGATGATGTTAT (SEQ ID NO: 1820) |
| 10 | STMN1 (SEQ ID NO: 27) | AGAAATTATGATGATGTTAT (SEQ ID NO: 1821) |
| 11 | STMN1 (SEQ ID NO: 27) | AGAAATTACGATGATGTTAT (SEQ ID NO: 1820) |
| 12 | STMN1 (SEQ ID NO: 27) | AGAAATTATGATGATGTTAT (SEQ ID NO: 1821) |
| 13 | STMN1 (SEQ ID NO: 27) | ATGGGTGATACGTCGGTG (SEQ ID NO: 1822) |
| 14 | STMN1 (SEQ ID NO: 27) | ATGGGTGATATGTTGGTG (SEQ ID NO: 1823) |
| 15 | STMN1 (SEQ ID NO: 27) | ATGGGTGATACGTCGGTG (SEQ ID NO: 1822) |
| 16 | STMN1 (SEQ ID NO: 27) | ATGGGTGATATGTTGGTG (SEQ ID NO: 1823) |
| 17 | PSA (SEQ ID NO: 90) | TTTCGATTCGGTTTAGA (SEQ ID NO: 1824) |
| 18 | PSA (SEQ ID NO: 90) | AATTGTTTTGATTGGTT (SEQ ID NO: 1825) |

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| | 90) | |
| 19 | PSA (SEQ ID NO: 90) | TAATGGGGCGTCGATT (SEQ ID NO: 1826) |
| 20 | PSA (SEQ ID NO: 90) | TTAATGGGGTGTTGATT (SEQ ID NO: 1827) |
| 21 | PSA (SEQ ID NO: 90) | TATCGTAGCGGTTAGG (SEQ ID NO: 1828) |
| 22 | PSA (SEQ ID NO: 90) | TATTGTAGTGGTTAGGAA (SEQ ID NO: 1829) |
| 23 | PSA (SEQ ID NO: 90) | AGGAACGTTAGTCGTT (SEQ ID NO: 1830) |
| 24 | PSA (SEQ ID NO: 90) | TAGGAATGTTAGTTGTTT (SEQ ID NO: 1831) |
| 25 | PSA (SEQ ID NO: 90) | GGTCGTCGTATTATGGA (SEQ ID NO: 1832) |
| 26 | PSA (SEQ ID NO: 90) | TGGTTGTTGTATTATGGA (SEQ ID NO: 1833) |
| 27 | CGA (SEQ ID NO: 91) | TAAATTGACGTTATGGTA (SEQ ID NO: 1834) |
| 28 | CGA (SEQ ID NO: 91) | AAATTGATGTTATGGTAAA (SEQ ID NO: 1835) |
| 29 | CGA (SEQ ID NO: 91) | AATTGACGTTATGGTAAT (SEQ ID NO: 1836) |
| 30 | CGA (SEQ ID NO: 91) | TAAAAATTGATGTTATGGT (SEQ ID NO: 1837) |
| 31 | PITX2 (SEQ ID NO: 83) | AGTCGGGAGAGCGAAA (SEQ ID NO: 1838) |
| 32 | PITX2 (SEQ ID NO: 83) | AGTTGGGAGAGTGAAA (SEQ ID NO: 1839) |
| 33 | PITX2 (SEQ ID NO: 83) | AGTCGGGAGAGCGAAA (SEQ ID NO: 1838) |
| 34 | PITX2 (SEQ ID NO: 83) | AGTTGGGAGAGTGAAA (SEQ ID NO: 1839) |
| 35 | PITX2 (SEQ ID NO: 83) | AAGAGTCGGGAGTCGGA (SEQ ID NO: 1840) |
| 36 | PITX2 (SEQ ID NO: 83) | AAGAGTTGGGAGTTGGA (SEQ ID NO: 1841) |
| 37 | PITX2 (SEQ ID NO: 83) | AAGAGTCGGGAGTCGGA (SEQ ID NO: 1840) |
| 38 | PITX2 (SEQ ID NO: 83) | AAGAGTTGGGAGTTGGA (SEQ ID NO: 1841) |
| 39 | PITX2 (SEQ ID NO: 83) | GGTCGAAGAGTCGGGA (SEQ ID NO: 1842) |
| 40 | PITX2 (SEQ ID NO: 83) | GGTTGAAGAGTTGGGA (SEQ ID NO: 1843) |
| 41 | PITX2 (SEQ ID NO: 83) | GGTCGAAGAGTCGGGA (SEQ ID NO: 1842) |
| 42 | PITX2 (SEQ ID NO: 83) | GGTTGAAGAGTTGGGA (SEQ ID NO: 1843) |

Claims

1. A method for predicting the responsiveness of a subject with a cell proliferative disorder of the breast tissues to a therapy comprising one or more drugs which target the estrogen receptor pathway or are involved in estrogen metabolism, production, or secretion, said method comprising analysing the methylation pattern of a target nucleic acid comprising one or a combination of the genes taken from the group consisting of PITX 2, CGA, PSA, and STMN 1 and/or their regulatory regions by contacting at least one of said target nucleic acids in a biological sample obtained from said subject prior to or during treatment with the above mentioned substances.
2. A method according to Claim 1, wherein said target nucleic acid or acids comprise essentially one or more sequences from the group consisting of SEQ ID Nos: 27, 90, 91 and 83 and sequences complementary thereto.
3. A method according to Claims 1 or 2, wherein said cell proliferative disorder of the breast tissue is selected from the group consisting of ductal carcinoma *in situ*, lobular carcinoma, colloid carcinoma, tubular carcinoma, medullary carcinoma, metaplastic carcinoma, intraductal carcinoma *in situ*, lobular carcinoma *in situ* and papillary carcinoma *in situ*.
4. A method according to Claim 3, wherein said subjects are estrogen and/or progesterone receptor positive.
5. A method according to Claims 1 to 4, wherein said endocrine therapy is an adjuvant treatment.
6. A method according to Claims 5 or 6, wherein the target nucleic acid comprises the gene PITX 2 and/or its regulatory region.
7. A method according to Claims 1 to 4, wherein said endocrine therapy is for the treatment of a relapse or metastatic cell proliferative disorder of the breast tissues.
8. A method according to claim 7, wherein said subjects have received chemotherapy.

9. A method according to claim 8 wherein the genes are selected from the group comprising STMN 1 and PSA.
10. A method according to claim 7, wherein said subjects did not receive chemotherapy.
11. A method according to claim 8 wherein the genes are selected from the group comprising CGA, STMN 1, and PSA.
12. A nucleic acid molecule consisting essentially of a sequence at least 18 bases in length according to one of the sequences taken from the group consisting of SEQ ID Nos: 188, 189, 430, 431, 314-317, 556 to 559, 300, 301, 542 and 543 and sequences complementary thereto.
13. An oligomer, in particular an oligonucleotide or peptide nucleic acid (PNA)-oligomer, said oligomer consisting essentially of at least one base sequence having a length of at least 10 nucleotides which hybridises to or is identical to one of the nucleic acid sequences according to SEQ ID NO: 188, 189, 430, 431, 314 to 317, 556 to 559, 300, 301, 542 and 543.
14. The oligomer as recited in Claim 13, wherein the base sequence includes at least one CpG dinucleotide.
15. The oligomer as recited in Claim 14, characterised in that the cytosine of the CpG dinucleotide is located approximately in the middle third of the oligomer.
16. A set of oligomers, comprising at least two oligomers according to any of claims 13 to 15.
17. A set of oligomers as recited in Claim 16, comprising oligomers for detecting the methylation state of all CpG dinucleotides within the group of SEQ ID NO: 188, 189, 430, 431, 314 to 317, 556 to 559, 300, 301, 542 and 543 and sequences complementary thereto.

18. A set of at least two oligonucleotides as recited in one of Claims 13 through 17, which is used as primer oligonucleotides for the amplification of nucleic acid sequences of one of SEQ ID NO: 188, 189, 430, 431, 314 to 317, 556 to 559, 300, 301, 542 and 543 and sequences complementary thereto.
19. A set of oligonucleotides as recited in one of Claims 16 through 12, characterised in that at least one oligonucleotide is bound to a solid phase.
20. Use of a set of oligonucleotides comprising at least three of the oligomers according to any of claims 13 through 19 for detecting the cytosine methylation state and/or single nucleotide polymorphisms (SNPs) within the sequences taken from the group SEQ ID Nos: 188, 189, 430, 431, 314 to 317, 556 to 559, 300, 301, 542 and 543 and sequences complementary thereto.
21. A method for manufacturing an arrangement of different oligomers (array) fixed to a carrier material for predicting breast cell proliferative disorders' response to tamoxifen treatment by analysis of the methylation state of any of the CpG dinucleotides of the group SEQ ID Nos: 188, 189, 430, 431, 314 to 317, 556 to 559, 300, 301, 542 and 543, wherein at least one oligomer according to any of the claims 13 through 19 is coupled to a solid phase.
22. An arrangement of different oligomers (array) obtainable according to claim 21.
23. An array of different oligonucleotide- and/or PNA-oligomer sequences as recited in Claim 22, characterised in that said oligonucleotides are arranged on a plane solid phase in the form of a rectangular or hexagonal lattice.
24. The array as recited in any of the Claims 22 or 23, characterised in that the solid phase surface is composed of silicon, glass, polystyrene, aluminium, steel, iron, copper, nickel, silver, or gold.
25. A DNA- and/or PNA-array for predicting breast cell proliferative disorders' response to tamoxifen treatment by analysis of the methylation state of any of the CpG dinucleotides of the group SEQ ID Nos: 188, 189, 430, 431, 314 to 317, 556 to 559,

300, 301, 542 and 543 comprising at least one nucleic acid according to one of the preceding claims.

26. A method according to any one of Claims 1 to 3 comprising the following steps:
 - a) obtaining a biological sample containing genomic DNA,
 - b) extracting the genomic DNA,
 - c) converting cytosine bases in the genomic DNA sample which are unmethylated at the 5-position, to uracil or another base which is dissimilar to cytosine in terms of base pairing behavior;
 - d) amplifying at least one fragment of the pretreated genomic DNA, wherein said fragments comprise one or more sequences selected from the group consisting of SEQ ID NO: 188, 189, 430, 431, 314 to 317, 556 to 559, 300, 301, 542 and 543 and regulatory regions thereof, and sequences complementary thereto, and
 - e) determining the methylation status of one or more genomic CpG dinucleotides by analysis of the amplificate nucleic acids.
27. The method according to Claim 26, characterised in that Step e) is carried out by means of hybridisation of at least one oligonucleotide according to SEQ ID NO: 1816, 1816, 1817, 1817, 1818, 1818, 1819, 1819, 1820, 1820, 1821, 1821, 1822, 1822, 1823, 1823 to 1838, 1838, 1839, 1839, 1840, 1840, 1841, 1841, 1842, 1842, 1843, and 1843.
28. The method as recited in Claim 26, characterised in that Step e) is carried out by means of hybridisation of at least one oligonucleotide according to Claims 13 through 19.
29. The method as recited in Claim 26, characterised in that Step e) is carried out by means of hybridisation of at least one oligonucleotide according to Claims 13 through 19 and extension of said hybridised oligonucleotide(s) by means of at least one nucleotide base.
30. The method as recited in Claim 26, characterised in that Step e) is carried out by means of sequencing.

31. The method as recited in Claim 26, characterised in that Step d) is carried out using methylation specific primers.
32. The method as recited in Claim 26, characterised in that Step e) is carried out by means of a combination of at least two of the methods described in Claims 27 through 31,
33. The method as recited in Claim 26, characterised in that the treatment is carried out by means of a solution of a bisulfite, hydrogen sulfite or disulfite.
34. A method according to any one of Claims 1 to 3 comprising the following steps:
 - a) obtaining a biological sample containing genomic DNA,
 - b) extracting the genomic DNA,
 - c) digesting the genomic DNA comprising one or more of the sequences from the group consisting of SEQ ID Nos 83, 91, 90 and 27 and sequences complementary thereto with one or more methylation sensitive restriction enzymes, and
 - d) determining of the DNA fragments generated in the digest of step c).
35. The method according to Claim 34, characterised in that the target sequence or sequences digested in Step c) comprises one or more sequences from the group consisting of SEQ ID NO 122 to SEQ ID NO 135.
36. A method according to one of Claims 34 or 35, wherein the DNA digest is amplified prior to step d).
37. The method as recited in one of the Claims 26 through 33 and 36 characterised in that more than ten different fragments having a length of 100 - 200 base pairs are amplified.
38. The method as recited in one of Claims 26 through 33, 36 and 37 characterised in that the amplification of several DNA segments is carried out in one reaction vessel.
39. The method as recited in one of the Claims 26 through 33 and 36 through 38, characterised in that the polymerase is a heat-resistant DNA polymerase.

40. The method as recited in one of the Claims 26 through 33 and 36 through 39, characterised in that the amplification is carried out by means of the polymerase chain reaction (PCR).
41. The method as recited in one of the 26 through 33 and 36 through 40, characterised in that the amplicates carry detectable labels.
42. The method according to Claim 41 wherein said labels are fluorescence labels, radionuclides and/or detachable molecule fragments having a typical mass which can be detected in a mass spectrometer.
43. The method as recited in one of the Claims 26 through 33, characterised in that the amplicates or fragments of the amplicates are detected in the mass spectrometer.
44. The method as recited in one of the Claims 42 and/or 43, characterised in that the produced fragments have a single positive or negative net charge for better detectability in the mass spectrometer.
45. The method as recited in one of Claims 41 through 44, characterised in that detection is carried out and visualised by means of matrix assisted laser desorption/ionization mass spectrometry (MALDI) or using electron spray mass spectrometry (ESI).
46. The method as recited in one of the Claims 26 through 41, characterised in that the genomic DNA is obtained from cells or cellular components which contain DNA, sources of DNA comprising, for example, cell lines, histological slides, biopsies, tissue embedded in paraffin, breast tissues, blood, plasma, lymphatic fluid, lymphatic tissue, duct cells, ductal lavage fluid, nipple aspiration fluid, bone marrow and combinations thereof.
47. A kit comprising a bisulfite (= disulfite, hydrogen sulfite) reagent as well as oligonucleotides and/or PNA-oligomers according to one of the Claims 13 through 19.

48. A kit according to claim 47, further comprising standard reagents for performing a methylation assay from the group consisting of MS-SNuPE, MSP, Methyl light, Heavy Methyl, nucleic acid sequencing and combinations thereof.
49. The use of a method according to one of claims 1 through 11, 21, and 24 to 46, a nucleic acid according to Claim 12, of an oligonucleotide or PNA-oligomer according to one of the Claims 13 through 19, of a kit according to Claim 47 or 48, of an array according to one of the Claims 23 through 25 or of a set of oligonucleotides according to one of claims 16 through 19 for the treatment, characterisation, classification and/or differentiation, of breast cell proliferative disorders.

Abstract

The present invention relates to modified and genomic sequences, to oligonucleotides and/or PNA-oligomers for detecting the cytosine methylation state of genomic DNA, as well as to a method for predicting the response of a subject with a cell proliferative disorder of the breast tissues, to endocrine treatment.

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Figure 1

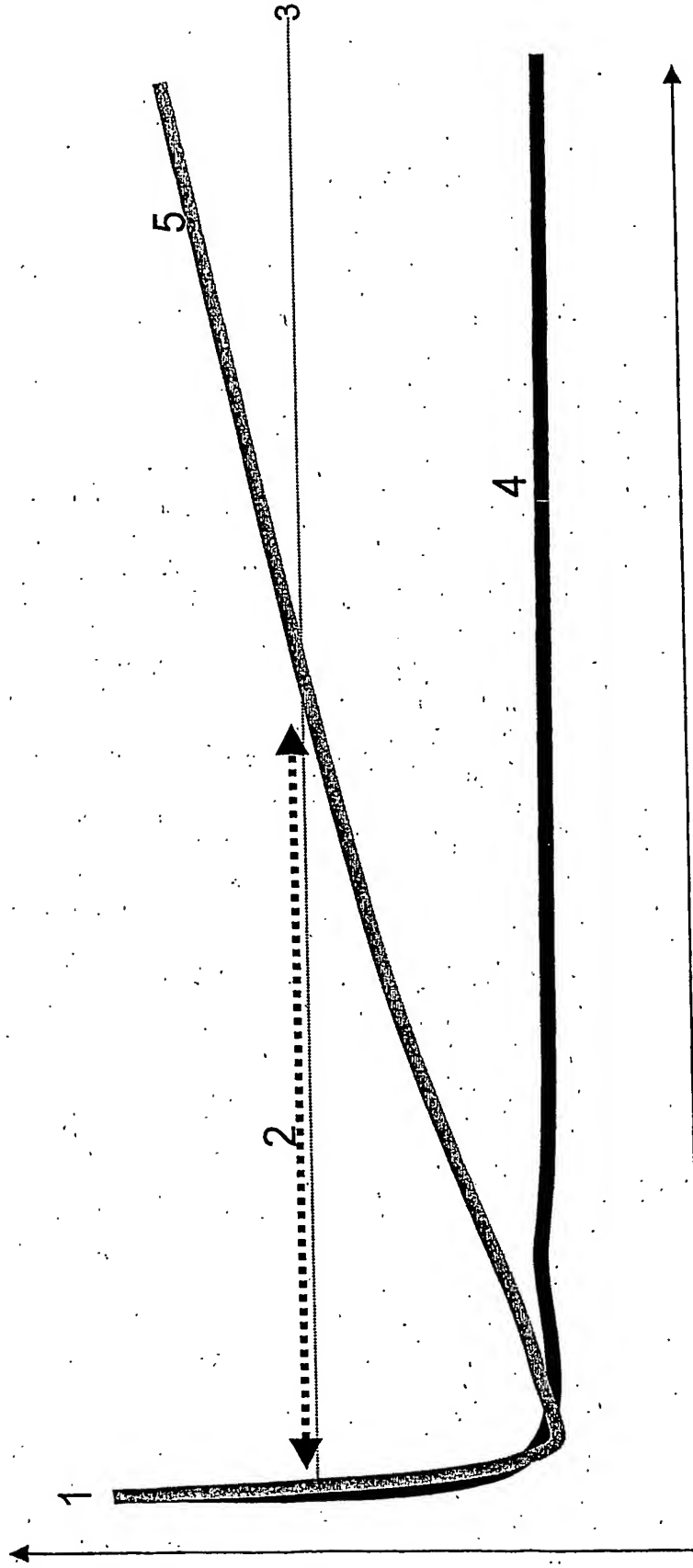


Figure 2

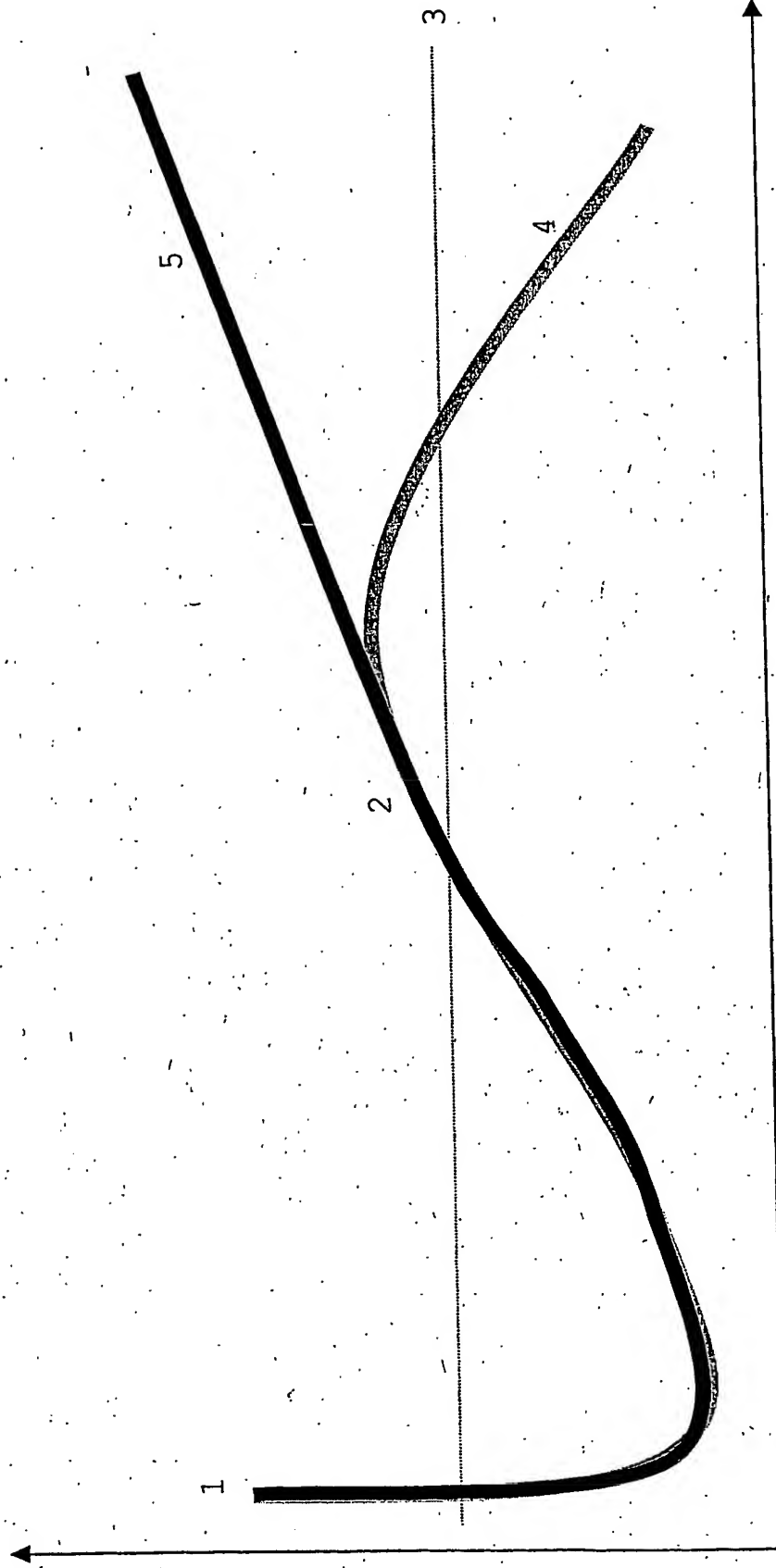
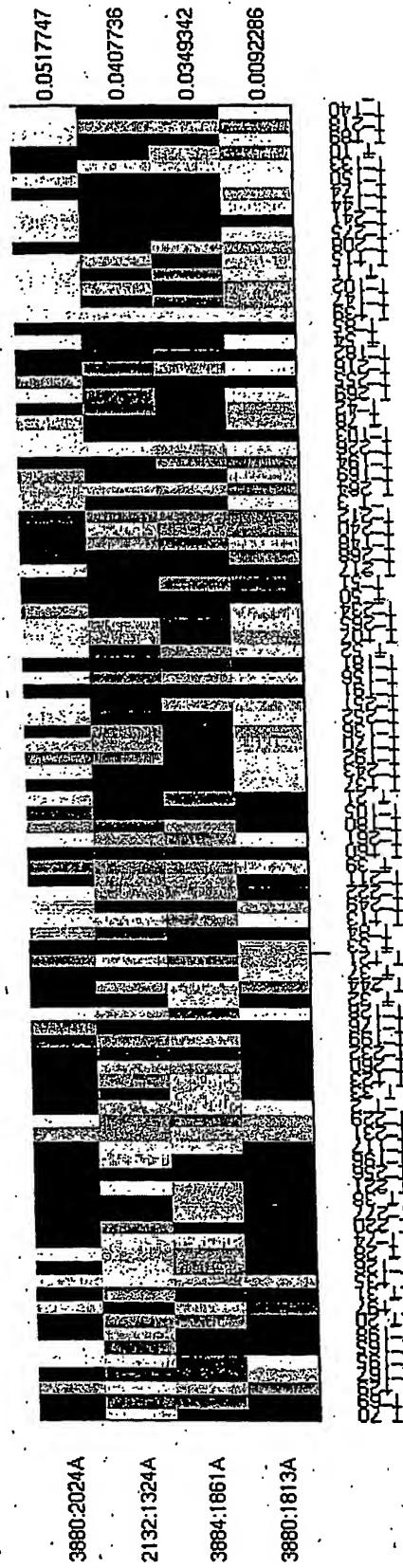


Figure 3

[illegible]

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Figure 4



141

Sequence listing

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<211> 2240

<212> DNA

<213> Homo Sapiens

<400> 11

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<212> DNA

<213> Homo Sapiens

<220>

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<211> 3486

<212> DNA

<213> Homo Sapiens

<400> 18

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| gttaattttct | ttctagagac | attataaact | ccttaaagat | ggaaaataat | tgttactttt | 180 |
| ttgaataatg | cctactatct | aaaacaatgc | acataaaagc | tgctcaataa | acttttgttg | 240 |
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<211> 1631

<212> DNA

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<400> 26

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<211> 6680

<212> DNA

<213> Homo Sapiens

<400> 27

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| cggaagcccc | ctgggccatc | atggacgcgc | agcttcgggt | aactcttaca | gtggaggaca | 420 |
| ggaatgtcag | gcctctgagc | ccaagctaag | ccatcatatc | cccagtgacc | tgacgtata | 480 |
| tatcaagatg | gcctgaagca | actgaagatc | cacagaagtg | aaaatagcct | taactgatga | 540 |
| cattccacca | ttgtgatttg | tttctgcccc | acottaaagt | atcaatgtac | tttgtaatct | 600 |
| ccccacccct | taagaagggt | ctttataatg | tcaccacccc | ttaagaagtt | tctttgtaat | 660 |
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<211> 16842

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<400> 28

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| tgatggcttc | tgtaaagtcc | ccatctccaa | ataagggtcac | attgtgaggt | actgggaggt | 240 |

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| agcacacctg | gagatgggat | ctcctcaaag | ctaaagtcac | caagtgttca | agtgtttcaa | 180 |
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| acactgggaa | tacaaatctg | tcaagaaaac | tagtaggaat | gagctatagg | acagtaactg | 300 |
| gtaaggacct | aataattttt | tttttaattg | acgtatttta | actatattca | ctgctacaac | 360 |
| aggaccagta | acaactatat | ttatttaaaa | aaaaaaagac | tgccatgcag | ttacagaatt | 420 |
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| tccactatgt | tgtttctcta | gatatgtaag | cttactctat | taaccaaatt | ctcagcttga | 840 |
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| cagaatcgat | gcattttttg | tgcattgacc | catttccaat | aataaaaggg | gaaagaggac | 480 |
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| aagggtctct | gctgactccc | ccggtctcgt | ccacaagctc | tccacttgcc | ccttttagga | 600 |
| agtccggtcc | cgcggttcgg | gtacccctcg | cccctcccat | attctcccgt | ctagcacctt | 660 |
| tgattttctc | caaaccoggc | agcccagagc | tggtgcaaac | cgcgccacac | ggcgccaaag | 720 |
| gggattttgc | tctttctgaa | cctggctgag | aaattgggaa | ctccgtgtgg | gagcggtggg | 780 |
| ggtgggacgg | tggggtacag | actggcagag | agcaggcaac | ctccctctcg | ccctagccca | 840 |
| gctctggaac | aggcagacac | atctcagggc | taaacagacg | cctcccgcac | ggggccccac | 900 |
| ggaagcctga | gcaggcgggg | caggaggggc | ggtatctgct | gctttggcag | caaattgggg | 960 |
| gactcagtct | gggtggaagg | tatocaaatc | agatagctgt | gcatacataa | tgcataatac | 1020 |
| atgactcccc | ccaacaaatg | caatgggagt | ttattcataa | cgcgctctcc | aagtatacgt | 1080 |
| ggcaatgcgt | tgctgggtta | ttttaatcat | tctaggcac | gttttcctcc | ttatgcctct | 1140 |
| atcattcctc | cctatctaca | ctaacatccc | acgctctgaa | cgcgcgccca | ttaataccct | 1200 |
| tctttcctcc | actctccctg | ggactcttga | tcaaagcgcg | gccctttccc | cagccttagc | 1260 |
| gagcgccct | gcagcctggt | acgcgcgtgg | cgtggcggtg | ggcgcgaggt | gcgttctcgg | 1320 |
| tgtggaggge | agctgttccg | cctgcgatga | tttatactca | caggacaagg | atgcggtttg | 1380 |
| tcaaacagta | ctgctacgga | ggagcagcag | agaaagggag | agggtttgag | agggagcaaa | 1440 |
| agaaaatggt | aggcgcgctg | agtttaattca | tgcggtctct | ttactctggt | tacatcctag | 1500 |
| agctagagtg | ctcggtgcgc | cggctgagtc | tctccccac | cttccccacc | ctccccacc | 1560 |

| | | | | | | |
|------------|-------------|------------|-------------|-------------|------------|------|
| tccccataag | cgccccctccc | gggttcccaa | agcagagggc | gtgggggaaa | agaaaaaaga | 1620 |
| tctctctcgc | ctaattctccg | cccaccggcc | ctttataatg | cgagggtctg | gacggctgag | 1680 |
| gacccccgag | ctgtgctgct | cgcgcccgcc | accgccgggc | cccggccgctc | cctggctccc | 1740 |
| ctcctgcctc | gagaagggca | gggcttctca | gaggcttgcc | gggaaaaaga | acggagggag | 1800 |
| ggatcgcgct | gagtataaaa | gccggttttc | ggggctttat | ctaactcgct | gtagtaattc | 1860 |
| cagcgagagg | cagagggagc | gagcggggcg | ccggctaggg | tggagagacc | gggcgagcag | 1920 |
| agctgcgctg | tgggcgctcct | gggaaggag | atccggagcg | aatagggggc | ttcgcctctg | 1980 |
| gcccagccct | cccgcctgac | ccccaccag | cggtccgcaa | cccttgctgc | atccacgaaa | 2040 |
| ctttgtccat | agcagcgggc | ggacactttg | caactggaact | tacaacaccc | gagcaaagac | 2100 |
| gcgactctcc | cgacgcgggg | aggctattct | gcccattttg | ggacacttcc | ccgccgctgc | 2160 |
| caggacccgc | ttctctgaaa | ggctctcctt | gcagctgctt | agacgctgga | tttttttcgg | 2220 |
| gtggaaaacc | aggtaaagcac | cgaagtccac | ttgcctttta | atttattttt | ttatcacttt | 2280 |
| aatgctgaga | tgagtcgaat | gcctaaatag | gggtgtctttt | ctcccattcc | tgcgctattg | 2340 |
| acacttttct | cagagttagt | atggtaattg | gggctggggt | ggggggtaat | ccagaactgg | 2400 |
| atcggggtaa | agtgaactgt | caagatggca | gaggagaagg | cagagggaaa | acgggaatgg | 2460 |
| tttttaagac | taccctttcg | agatttctgc | cttatgaata | tattcacgct | gactcccggc | 2520 |
| cggtcggaca | ttcctgcttt | attgtgttaa | ttgctctctg | cgttttgggg | ggctgggggt | 2580 |
| tgctttgcgg | tgggcagaaa | gccccttgca | tcctgagctc | cttgagtag | ggaccgcata | 2640 |
| tcgcctgtgt | gagccagatc | gctccgcagc | cgctgaactg | tccccgtctc | cgggagggca | 2700 |
| tttaaatctc | ggctcaccgc | atttctgaca | gccggagacg | gacactgcgg | cgctcccgc | 2760 |
| tcgcctgtcc | ccgcggcgat | tgcaaccgcg | cctgatcctt | ttagaagtgt | ggcatttggc | 2820 |
| tttttaaaaa | acaataatac | aatttaaaac | ctgggtctct | agagggtgta | ggacgtgggt | 2880 |
| ttgggtaggc | g | | | | | 2891 |

<210> 34

<211> 3291

<212> DNA

<213> Homo. Sapiens

<400> 34

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| gccacataat | ggatacctaa | caatatgtgg | atttcggggt | gacccoctgc | agcttgggtg | 120 |
| gggtgaggcc | aggactttgc | tgctcttgcc | aggatttaga | gttactgtca | ctgctgctcc | 180 |
| atgatgtaga | ctttactgaa | tgaacaaata | caggctgggc | ctatggagta | aagcgagggtg | 240 |
| agtacttcat | gaaggagac | cttcagcacc | actaccagca | gcagagaagt | gaagaagtta | 300 |
| ggaccccaac | agagccctct | gagttttgtg | ggaaggagg | acttcttagg | gccagaacg | 360 |
| gccagctaga | atgccttcca | gaagttagtg | ggaaaggcac | aaagatcact | cctgcttaaa | 420 |
| tttctgggtt | ccaggagggg | agatccaggc | agggatgtat | ggccaacgga | gattcctagc | 480 |
| cagagtgcgt | agaggactgt | gtgaactgca | gattcaggaa | gaggctgaga | gaccccatg | 540 |
| gggtggcg | gtatgctgag | gcttgatgg | gagccagata | tcccacatcc | catgggggtg | 600 |
| tgctctctc | ctgtttccag | cccttccagt | gagctgcag | gaaagagaca | cagctaaggc | 660 |
| ctggagactc | gtggcactcc | gtcagggcag | ggtaccacag | atgagttgta | agcctgcggg | 720 |
| acacagcatc | caactctgaa | agcccttgc | tcgaataacc | ctacatcacc | gcctgagggc | 780 |
| ttccatatac | ttggtctctt | cagactgtca | tccccaccac | aattactcca | agaaattact | 840 |
| gtcatcccca | aatctataac | tggaaactga | ggctcaggaa | ggagacatga | cttccacaaa | 900 |
| atcacacagt | tgggaaactc | tggagtctgc | actcaactgg | tctgcaaacc | gcactctcgg | 960 |
| agacttcagg | tgagatgagg | tcaggttctc | aggccaggtc | ctgaagtttg | acaccttggc | 1020 |
| gaaatgcact | ttccttgact | cagcaccgcg | agtgaggcgg | agccaagccc | cgagcagaag | 1080 |
| ggttttcttc | ccagctgaag | aggcagctca | gcctagaccc | caggcatggc | actggacacc | 1140 |
| cctgctgtgg | aaacgtgcag | atttagatgg | aggggattcc | taacctgggc | aggatccgag | 1200 |
| tttgagaga | ttggcgcgaa | gctttagcag | caatctccga | ttcctgtaca | accatagctg | 1260 |
| ggtttctaag | cgtctaggga | agaaggactg | ggcccacgac | ctgctgagca | actcccaggt | 1320 |
| cggggactgg | cggaaatatca | gagcctctac | gaccctgttg | tctcggtctc | gccacttca | 1380 |
| actctcgggg | tctctecgce | tggtgttgca | ctegtgcgtt | tctctgcccc | tgacgtctca | 1440 |
| agctttctgc | tttctgcgtg | tctctcagcc | tcttctcggtc | cctctttcac | ggtctcactc | 1500 |
| ctcagctctg | tgcceccaat | gccttgctct | tctccaaatc | tctcacgacc | tgatttctac | 1560 |
| agccgctcta | cccattgggtc | ccccacaaat | caggggacag | aggagtattg | aaagtcagct | 1620 |
| cagaggtgag | cgcgcgcagc | cagcgtttcc | cgcggataca | gcagtcgggt | ggtggagagg | 1680 |
| tttgaaaagg | gcgtgccgga | gagccaaagt | cagccgccta | gggctgccgg | tcgctccctc | 1740 |
| cctccctgcc | cggtagggga | cctagcgcgc | acgccagtgt | ggagggggcg | gctggctggc | 1800 |
| cagtctgcgg | gcccctgcgg | ccaccgcggg | gacccccccc | aagccccgcc | ccgcagtgtt | 1860 |
| cctattggcc | tggactccc | cctcccccag | ctgcccgcct | gggctccggg | gcgttttagc | 1920 |

| | | | | | | |
|------------|------------|------------|-------------|------------|-------------|------|
| tactacggat | aaatagccca | gggagcctgg | cgagaagcta | ggggtgagga | agccctgggg | 1980 |
| cgctgcccgc | gctttcctta | accacaaatc | aggccggaca | ggagagggag | gggtggggga | 2040 |
| cagtgggttg | gcattcagac | tgccagcact | ttgctatcta | cagccggggc | tcccagcgcg | 2100 |
| cagaaagtcc | cgcccactct | ctgccgcttg | ggttggggcga | agccaggacc | gtgccgcgcc | 2160 |
| accgccagga | tatggagcta | ctgtcgccac | cgctccgcga | cgtagacctg | acggccccccg | 2220 |
| acggctctct | ctgctccttt | gccacaacgg | acgacttcta | tgacgacccg | tgtttcgact | 2280 |
| ccccggacct | gcgcttcttc | gaagacctgg | acccgcgcct | gatgcacgtg | ggcgcgctcc | 2340 |
| tgaaacccga | agagcactcg | cacttccccg | cggcggtgca | cccggccccg | ggcgacacgtg | 2400 |
| aggacgagca | tgtgcgcgcg | cccagcgggc | accaccaggc | gggcgcgtgc | ctactgtggg | 2460 |
| cctgcaaggc | gtgcaagcgc | aagaccacca | acgcgcacgc | ccgcaaggcc | gccaccatgc | 2520 |
| gcgagcggcg | ccgcctgagc | aaagtaaagt | aggcctttga | gacactcaag | cgctgcacgt | 2580 |
| cgagcaatoc | aaaccagcgg | ttgcccaagg | tggagatcct | gcgcaacgcc | atccgctata | 2640 |
| togagggcct | gcaggctctg | ctgcgcgacc | aggacgccgc | gccccctggc | gccgcagccg | 2700 |
| ccttctatgc | ggcggggccc | ctgcccccg | gccgcggcgg | cgagcactac | agcggcgact | 2760 |
| ccgacgcgtc | cagcccgcgc | tccaactgct | ccgacggcat | ggtaaggccg | ggaccccagg | 2820 |
| aagtgaggaa | gttagggcgg | cgctcgggat | atcaggggacg | cgtttccgag | ggcggggagc | 2880 |
| tggccttgcg | ggaggtttgg | gccaggatcc | ttcccagag | agaggacccc | cttgtctgg | 2940 |
| gcagctgtca | ctggggtagc | ctgttttgga | agtgtgcggg | caagcgttcg | agctgccccca | 3000 |
| ttggggggcg | tattagaaca | ctgcagcgcg | aacgtgaaga | tctttttctc | tacttatccc | 3060 |
| tacttcaaaa | atgtaaaatt | gcgccccctg | gtgactgtcc | gcccttggtt | tggccctgca | 3120 |
| gtttgcagac | ctcatctcct | acccacccgt | aattaccccc | cgaaccagga | caggtctggg | 3180 |
| ccggaacta | gagccttagg | ctagagttag | ggagggggcg | gctacaggaa | ttggtgttcg | 3240 |
| ggcctcgagc | cgtccccggg | gcctgactca | gtcgcccttg | ctgtttgcag | a | 3291 |

<210> 35

<211> 1092

<212> DNA

<213> Homo Sapiens

<400> 35

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| aagcttcccc | ttcatcatcc | aagaaggcat | tcagggtcttt | ctgtgctagg | ccccaggtaa | 60 |
| agtgtcggac | taccagtaa | ttgggttcag | tagcaggatg | gcctcagatt | gaggtcccag | 120 |
| ggccaaaggga | ccactcctct | cctcagcgct | ggtccgggaa | aggcaagctc | cgggcggggag | 180 |
| cgacgcgcgc | gccccgaag | cctggctccc | tcgccacgcc | cacttccctgc | ccccatcccg | 240 |
| cgcctttcca | ggtctttctc | cggtgaaccg | gatgctctgt | cagtctccta | ctctgcgtcc | 300 |
| tcggccgcgg | cccgggtccc | tcgcaaagcc | gctgccatcc | cggagggccc | agccagcggg | 360 |
| ctcccggagg | ctggccgggc | aggcgtggtg | cgcggtagga | gctgggcgcg | caaggctacc | 420 |
| gcgcgtggag | gagacactgc | cctgccgcga | tggggggccc | ggcgcgtcct | tcacgcogta | 480 |
| ggcaagcggg | gcggcggctg | cggtacctgc | ccaccgggag | ctttcccttc | cttctcctgc | 540 |
| gctgtcgtct | ctgcatccag | ctcgggggag | gacagaagaa | aaaggaggta | gaatggatcc | 600 |
| ctttggcctt | cccctgtggt | cggggggcgg | ccagggtggg | ccgcgttgcc | caggeagccc | 660 |
| cgccgtgttg | ctaggcagcc | tggtcgcggg | cgtgggcgat | gccggcgctg | gggcgggagc | 720 |
| cgcgaggggt | ggaggccctg | gggcgtttcc | gggacgtgga | gttagcaggg | ttctgacttg | 780 |
| aaaaacgacg | gcaaagcgtg | ttcttgactg | cttctgagca | cctcacacct | ttcagaccca | 840 |
| gggcgccttt | attcccagct | ggaagocag | cttagagcaa | tggtgccact | aaaaggggtg | 900 |
| tggttgatgt | gaaaataccc | tttggagta | tttataagcc | tgcaggaaa | atgttttctc | 960 |
| tattttctta | ctctgtccc | ttcattaccc | atttcaagaa | gcaacagaac | ctgtgcagag | 1020 |
| tgtgttttaa | gttacactgt | atgtttatct | ttgtttatgt | tgaactcggg | gtatacttgt | 1080 |
| gagaataagc | tt | | | | | 1092 |

<210> 36

<211> 5203

<212> DNA

<213> Homo Sapiens

<400> 36

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| agggaaaccca | acgccccctc | ggggcagaag | ggggcagcgc | gcgcgaggcg | gaaggacagt | 60 |
| cactctcgct | gcacaaactt | tcccgcgggc | cgcgccgcgc | gtgcaggggc | tggacgccac | 120 |
| ccggcgccag | agccgggcct | gaggagcggg | gtctggccgg | gaacgagggc | tgccagcctg | 180 |
| ggtggtgtca | tttgttgctt | catttttcat | tccctttcct | ctcgtgaagg | atcagaggca | 240 |
| tcgggcccgc | cgggctgaga | attcttaaat | tctccccggc | cgcattcggc | tgagccaacc | 300 |

| | | | | | | |
|-------------|------------|-------------|-------------|-------------|-------------|------|
| cgagttcct | gtcagcccc | ctgtccccc | ggcagcggtt | ttccccgcta | gccaggtttg | 360 |
| gaagtacccc | tctgtgagac | tgggttagga | agtacgaaa | agcgccgaat | tgttttcaaa | 420 |
| ttgaaaatac | tttttttttt | ttttttggag | atagcgctga | caaataatg | ggatcccgcc | 480 |
| ttttgatccc | tggtgcccgc | ctctgttctc | ctgtcgctaa | taaaactcgc | attgagcccc | 540 |
| ttagtgcctt | gattaacagg | cagattaact | cttactgggg | ttgggaacag | cttgtcctaa | 600 |
| tcaatgtcat | tttaaaagcc | cgtcaggatg | cgcttagctt | cggttccctg | gatgcttgag | 660 |
| cgagccagcc | atgacatttg | ctccctcccc | ctccccagcc | tcaaatcccc | cagtaaagcc | 720 |
| cccagttccc | gcctgcctgt | tcccaggtct | acaacgggac | aaatcgcagg | accgggtcgt | 780 |
| tggccttttag | aataggcagc | gggttagaga | ggggatatcc | agggagaagg | gactgaggtg | 840 |
| gccttgactt | gcttgctttt | cctttgaagc | tgaactcttg | cctcttgggg | gcagaggtta | 900 |
| cagggaaaag | agagatgggg | ggatcgtcac | aggggtgatga | aatggaaagc | aaacttttct | 960 |
| aggaacccta | tttgcaaaaa | tgggagagt | ccgctgattt | cagttgtcct | acatgtcagg | 1020 |
| agtttttaaac | ctaactccta | tctggacaac | agcatggagg | gactgggagg | caaagccttg | 1080 |
| ggagtctgac | ccgctgggct | gctaggaatc | cctttgctgg | gagactccac | tggacattgt | 1140 |
| tatttttaag | gtattttggg | gggtgggcagg | gagaagacag | agagagaaag | agagagagag | 1200 |
| agagagagag | agagagagag | agagagagag | gctggcctcc | cagagcgaac | ggaagaggac | 1260 |
| tgaggactga | actcagggag | cccctagcac | tgggcatttg | gcaggaggcg | aggaagggcg | 1320 |
| agggcacccg | ggcttcccc | caagccgagc | agtggccaca | gcctgaaggt | gccacggggc | 1380 |
| ggctctggga | tcttcttggc | ttttctaggc | tctgggctcg | gcgaggctgc | cggttagcgc | 1440 |
| ggaaccggca | gggtgctgga | gaaaggagag | ggacaagagg | ctggaagtgg | gggaggcacc | 1500 |
| ggggaactgg | cggccgggat | gggagccttt | gcctttaggg | ctcactggac | ccgtttgcca | 1560 |
| ctccgcggga | caagggatcc | caccttccca | gggtctgcaa | aaagagagac | gtttggggca | 1620 |
| ctacaaagt | acgcaggtgt | ctgccaagac | tttccctctc | caaaaaatgc | cagtcttcac | 1680 |
| cctttccagc | gcgcgggcgc | tgcgcctctg | cttgaccggg | gaaagagaga | gtttggaggt | 1740 |
| gtcagaactg | tcagaactcc | ggatgggagg | ctcttggttc | tgaagctggg | agctggaggc | 1800 |
| acttcccccc | agaagtgggc | acttctttgc | ctccccgaag | gcctgatggg | gtgggcacag | 1860 |
| gggaatgcca | gggatcggtg | cgggtgagat | gcttgccctc | cctcatgttg | acgcatcaat | 1920 |
| actggctaga | agctctgggc | aggctctggc | gagccacggt | cccccgagcg | gactccctcc | 1980 |
| acgcagacag | ccccgctacc | gggtgggacg | accccgggcg | cccccgcggg | aacgcacccg | 2040 |
| ccggcctgag | aggtcctccc | tctggccaca | ggggcgggag | ggtagggggg | aacagggggc | 2100 |
| tgtggggagg | cggggaaagg | agacagaacc | taaagcgcaa | tccccgcgcg | cccccgcgct | 2160 |
| cttgaggggc | agcaagtggg | cctcgggctg | gttggtagcc | gcaattaaaa | tggcgactgt | 2220 |
| cgagtgtct | cggttttgta | cacacctctg | gcaaccgcgc | ccgcacctca | gtctcgcccc | 2280 |
| ccacaccct | agccgcttc | gccccagag | ccggtacttg | gcagaaggag | tgaggctccc | 2340 |
| cacgaggtag | aacagcaccc | ccaacttctt | tgagaccagt | ccagagagaa | cgaggaaatc | 2400 |
| tactctcac | ccctctctcc | ttaaactttg | aaaactcgcc | ctcattctgg | ggttgaaact | 2460 |
| ccctcccaa | atattgacac | atgggaagca | gccaagtctt | ttttgttttt | tgtttggtcg | 2520 |
| gaggagtttc | caggagtctt | tcccggagcc | cccttcccca | cccaatgacg | tcagtggtcat | 2580 |
| tactcctcg | ctccttgctt | tttctgattt | tttggttaaaa | cttttctccg | cagcgagatg | 2640 |
| ggggttgagg | gggtgggaga | aggagctgat | tcaaagagcc | agtgcctggg | ggggaaatag | 2700 |
| aaacaagatt | acggctgctt | ctttccgagg | caaagcttaa | gaaggtgcta | atccactcgg | 2760 |
| cgctaattg | agaggttgta | aaaatgatac | tcgcctccag | ttcggaacaga | atcacttccc | 2820 |
| ccccccccgc | ccccccgcaa | gtccctcgct | catgcacagc | ggacttgagt | cttgagtcca | 2880 |
| agcttcttta | atgctcgctt | ggaaagtaaa | aggagagaga | aagagaaagc | cgactttcgc | 2940 |
| tggctggga | ctcaggggcg | cggccocact | tgccggcato | ctccgaaagt | cgcgctcctg | 3000 |
| cgaaatgaaa | cctcgcccag | gaggccgcgg | acctggacac | ccggcgccac | ctccttcacc | 3060 |
| tctgacccag | gtttcctccc | ggcgtgcca | gctcccgggg | aagggttaga | gccggcagcc | 3120 |
| ctccccagcc | cggggagggg | agagggttat | gcgacccac | ctctggctag | ggccggggag | 3180 |
| gcctttgctt | ccggggagcc | ctgcccgggc | tccttggtcg | cagggtgctg | gggtcccagg | 3240 |
| caggaacgag | aggtgagggc | ccacatgtgg | ccggcgggcc | caggggcggt | tgacgcgtcc | 3300 |
| tcactgtccc | ggctgcccag | ggctgcccgc | acgcggccag | tcagcagcga | gttcaggctcg | 3360 |
| cgagattttt | attgatgagc | tctgactttc | agcactttcc | ctaagtcaag | aagagtctag | 3420 |
| cgtacccttc | ggctgcttca | tttcagcctc | cctgcctcag | ctcttcagcc | ctattccccc | 3480 |
| tcgcctgttc | ctggggtgtg | tacagcagcc | caggccttcc | ttctccttcc | cggtcccggt | 3540 |
| gcccgaagcc | gccgagagag | ctcgggacag | cgcaggacca | ggcagccgct | cgctctcctg | 3600 |
| tcaccttaac | tgcaggctcc | gaggggcgcc | tttggaagtgt | actgaggtgt | gtcctaateg | 3660 |
| tgcggcatte | aacaaatgga | cttctggtgt | gtggtcagaa | aggggagctg | cctccgtgga | 3720 |
| tttctcccc | ggttttctgg | caacagctga | aggggagctg | acgcaccaca | ctgagcagac | 3780 |
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<211> 5087

<212> DNA

<213> Homo Sapiens

<400> 37

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| gagaaagcct | gaaaacaaca | ataatgatat | taataaatta | gtttacttct | ctagtctcat | 180 |
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| gctccccagg | agccccagag | ctgagtgttg | cccgccaccg | ccccgccctg | ccccctccag | 1920 |
| tccccacccc | tggcgagagg | actagtattg | ggtgggaggc | cccacccttc | tccccctaggc | 1980 |
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| ggcagatggg | tgggagtggg | actggaatct | gacttagaga | ccctgacttt | ggacctctga | 2460 |
| gttagggccc | tgaactccct | aggtggctca | gtggcccgca | cgcaagactt | tgagtccagg | 2520 |
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<211> 6558

<212> DNA

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<400> 41

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| tagggatacc | gagctcgaat | tcgaatcagg | tatcaggcat | gctccatcac | cacaaaagat | 300 |
| caaaaagat | gcgcacagtg | gcgcacacct | atagccccag | ttactgagga | ggttaatgtg | 360 |
| ggaggatcac | atgaggctgc | agtgaagctg | gatgggtgcca | ctgtactcca | gccttggcga | 420 |
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| ggcgcctgct | gaggttgaga | aatgagacag | ataggctgag | tgtggggtgg | agagaggatg | 600 |
| ggcagagaga | ctgaggctgg | tctgaatgga | aatgaaatgt | tagggctctc | agggttatcg | 660 |
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| | | | | | | |
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| agagtgggat | tgggatcgga | ctctaggggc | cattccgtac | aactctcctg | ccctgccgtg | 1980 |
| ggggagggag | ttgcccagg | ttacgcagca | agttagtggc | aaatgaatac | gattatcacc | 2040 |
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| aggccctccc | ctggatatct | cagtctaggg | gcccttcttt | gggggtctag | gcctaggagc | 5520 |
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| agatgcagcc | cctgccttcc | cattcagaga | ggggttttgt | gaggtggctt | gggggcatag | 6480 |
| ggcagaagtg | gatcctaagc | gctgagctaa | ggcccccaaga | gcctcagcag | tgtaccctac | 6540 |
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<211> 1334

<212> DNA

<213> Homo Sapiens

<400> 42

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| tggctaattt | ttgtattttt | tttttttgta | gagacggggt | ttcgcccatg | ttggccaggc | 120 |
| tagtctcaaa | ctcctgactt | taagtgatcc | gcctgctttg | gcctccaaag | tggtgggatt | 180 |
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| atgagtagga | cctggattaa | ggtcagggtt | gaggagactc | ccatgggaaa | gagggacttt | 480 |
| ctgaatctca | gatccctcag | ccaagatgac | ctcaccacat | gtcgtctctg | tctatcagca | 540 |
| aatccttcca | tgtagcttga | ccatgtctag | gaaacacctt | tgataaaaaat | cagtggagat | 600 |
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<210> 43

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<212> DNA

<213> Homo Sapiens

<400> 43

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| tacaggcata | agccagcatg | cccggcccat | attctttaac | tgtatgtaca | atttaatttg | 180 |
| tagatgatcc | taaaagtcta | aattggagtc | ctactgtctt | cctcatcttc | agcccccata | 240 |

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| tatttaacct | tgcttttccg | tgattcctca | cccttcacat | cccttatata | tcttagctat | 360 |
| tgccctcaaaa | attctggata | acaaaccaac | ccaaattttt | ccttaaaccg | catttactta | 420 |
| ttcttactca | gactcatatg | gattggctag | aggtaggctt | gagattggct | gatggaggct | 480 |
| tggttagatg | tcaatcagga | ggttgggtcca | catctgttcc | acatgtctct | cctcctccct | 540 |
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| aggattatct | ttggataata | gggttaagaa | tccttttaaa | gtctgccttt | aaaaaaaa | 900 |
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| tttcaaaaac | tactattgat | gctttctgta | aacatgtggc | ataattgcag | gttctattaa | 1020 |
| tatctgtgaa | gaactgcaaa | caagagaatg | gattaggaaa | actgatattc | ttatttttct | 1080 |
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| ccacaatttg | attcagttca | attgtgtgtg | tttgtgtgtg | cgtgcagagt | ttaaaaagct | 1680 |
| ggtaaaatag | attgtcagct | tttaaaattt | ctgttcaagt | tgatatttat | tgtttttcaa | 1740 |
| ctcattaagg | gcttaaacgt | taccttcctt | gttttttaaa | ccctgagtcg | ggctattatt | 1800 |
| tttttgttcc | caattgcaaa | tggtcccagtt | ttttacatgt | atatattaac | tgcttatgtg | 1860 |
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| agaggggaag | atgccttgca | gaggaaaactc | acagtggctg | agggagcccc | tggccgcctt | 6540 |
| tgctttccta | acttaggtcg | tgaggttcct | accggtcctt | ttgacatctg | gaaaatgtcc | 6600 |
| ccattcacta | ctaacggagg | aagggtctaga | agagaagggt | ggggaaaggg | ttcccaaaac | 6660 |
| ttggaatgct | aactaaagtg | ctgggaaatt | gaatagttaa | aaaaaaaaaa | aaaagttgcc | 6720 |
| cgccatgtgc | acggaaagtt | gcaggagaaa | cttgagtagc | tccgagtctg | catcatctcc | 6780 |
| tgcgcttatg | aaattcattc | ttttcactga | gacccaaccc | agctgcaggc | ttcceaggca | 6840 |
| agcgctaacc | gagcttctgg | gactgccaaag | tttgggtgga | tttaaggggg | aaaatgagga | 6900 |
| gaaagctgtg | gcattgaccc | acgcccctgga | ggcactgtgt | ttgagagtgt | tgatagccag | 6960 |
| cagaagggtg | gaggggtcac | tcaocacata | gctgtgaaaa | ttcacaggaa | ggctattttt | 7020 |
| cccccttg | aatgtgtgtg | gggaggggga | gaatgggtag | tggaaaacag | atttgtcacc | 7080 |
| taagaacaa | acctgccaag | ggtcacatca | cggtgacagt | tccagactgg | acttagtgtc | 7140 |
| tgagtagag | agaccctgta | aagagacctc | ctactcotta | gtgtgtatgg | agggccccga | 7200 |
| gagcatcctg | ggaggcttgt | ctgggagtgt | ttgggacact | tgtgtttgga | tggctaaagg | 7260 |
| tggagtggca | tctgggaaac | atctctctcc | tcctttccag | cccataaag | | 7309 |

<210> 45

<211> 2501

<212> DNA

<213> Homo Sapiens

<400> 45

| | | | | | | |
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| agctgggact | acagggtgcac | gccactatgc | ctgggctaatt | ctttcatttt | ttatagagac | 60 |
| aggacctcgc | tatgttgccc | aggctgggtc | caactcctga | actcaagtga | tccacctgcc | 120 |
| ttgggctccc | aaaatctcgg | gattacaggc | gtatagtgtc | aggccttcac | attcttatat | 180 |
| acctctctgt | ttccttagct | gtgaaatgga | gataatgaca | tagccttaat | tcacgtggga | 240 |
| tgcttagcac | agtgtctgga | acttgataga | tttttttctt | tctacttgaa | atttattttt | 300 |
| gagctgggca | cggtggctca | cacctgtaat | cccagcactt | gggaaaacca | aggcaggcag | 360 |
| attacctgag | gtgaggagtt | caagaccagc | ctggcaaaca | tggtgaaacc | ccgtctctac | 420 |
| taaaagtaca | aaaattacct | gggtgtgggt | gcacacacct | gtaatcccag | ctactccaga | 480 |
| ggctgaggca | cgataatcac | ttgaactcgg | cagatggagg | ttgcagctga | gctgagactg | 540 |
| agccactgca | ctccagcctg | ggtgataaag | cgagactgtc | taaaaaaaaa | ttatttttaa | 600 |

| | | | | | | |
|-------------|------------|------------|-------------|------------|------------|------|
| cctaataataa | aactctctga | acccttcttt | ttctgagctg | cttctccact | tgagtcacac | 660 |
| ccacatcatt | gaacagttaa | tcacagaatt | gtgtaccatc | ttccttgacc | cccagatctt | 720 |
| tagccttcta | tagtaccctg | tctctttttg | tctgtactagt | cacagttgca | cttttttttt | 780 |
| tttttttttt | gagacagagt | ctcattctgt | caccaggtgt | gcagtgagct | agcacaatct | 840 |
| cagctcactg | caacctccgc | ctcccggtt | caagcaattc | tcctgcctca | gcctcctaag | 900 |
| tagctgggat | tacatgcgcg | caccaccag | ccaggctaatt | ttttgtattt | ttagtagaga | 960 |
| cgaggtttca | ccatgttgct | aggctggtct | agaactcctg | accttgatg | cagcccactt | 1020 |
| cagctccca | aagtactggg | attacaggca | tgagccactg | cacccggcca | tagttgctat | 1080 |
| tttattttgtg | tgattgatta | ccgtatgacg | cttttattga | agtgcagtga | aggcaggaaa | 1140 |
| catgaccggt | ttttacaata | ttttcaacac | ttatcaccat | agggtgtaca | tagtagggcc | 1200 |
| ttataaata | tttgtaaaat | gaacaaagt | aatgagtgtt | tatgtttgta | gttttaattg | 1260 |
| ctctgaagta | aatatctgat | tttccaattt | ccaccagagt | gctctgcaca | tagtaggtct | 1320 |
| aattattttt | cctcttttac | taatacacca | tgccctgtaa | gaattcagtt | agttgacttt | 1380 |
| ttgtacttta | taagcgtgat | gattgggtgt | tcccggtgtg | gatgcgccac | cctcgaaact | 1440 |
| tgttacgacg | teggcacatt | gcgcgtctga | catgaagaaa | aaaaaaattc | agttagtcca | 1500 |
| ccaggcacag | tggctaagga | ctgtaatccc | tgcaacttga | gaggccaagg | caggaggatc | 1560 |
| acttgaaccc | aggagtctga | gaccagccta | ggcaacatag | cgagactccg | tttcaaacaa | 1620 |
| caaataaaaa | taattagtcg | ggcatggtgg | tgagccaggg | cagtaccaac | tactcgggag | 1680 |
| gctgaggcga | gacgatecgt | cgacagagtg | aggtcaagga | tgagtgagc | caagctcgcg | 1740 |
| ccactgcata | ccagcccggg | aaaattttat | agaccctgtc | tcaaaaaaaa | aaaaaacacc | 1800 |
| aaaccttaga | ggggcgaaaa | ctacggtgct | agtggaaata | cagtaacgag | ttggcctagc | 1860 |
| ctgcctccg | ttacaacggc | gcgcgttcca | tcctctaccg | tctgcgcacg | cgcaagcct | 1920 |
| ccggccggct | atttccgcga | acgcagctcc | gccccgcgtc | agcgcgcgcg | aagactacgg | 1980 |
| aggtcgactc | gggagcgcgo | atcgcgagg | gaatgccccg | cgaccccgcg | atcccccggc | 2040 |
| gtccggcccg | ggtggtctgg | gaggcaggcg | togaagagta | gagggcgag | aactgggacg | 2100 |
| aggccgaggt | aggcgccgag | gagtcggcc | cggaaagagc | cgccctgaa | gaagacggcg | 2160 |
| gggaggagtc | gggcccagag | ggcgccgcgc | ggcccggtgt | cgcccgag | gaactgggag | 2220 |
| ccgaggaggga | gatggaggcc | tgcaatcgca | gtccgcgctg | gcgctcggtg | aactcgcgcg | 2280 |
| agccctccca | ggtcatcttc | ccctaaccac | cgctgcgcgc | cgctgctgcc | gtatggctca | 2340 |
| acttcgacgg | cgagccgcag | ccggcgctta | ggcccgaccc | agcagggagc | atagcacggt | 2400 |
| acagctaccg | aggtacgggc | cttaccgccc | cttgcagacg | | | 2460 |
| ctgaagcccc | | | | | | 2501 |

<210> 46

<211> 2401

<212> DNA

<213> Homo Sapiens

<400> 46

| | | | | | | |
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| catcaaga | aaaaaagat | gacttactag | acagttgtta | aggaactcac | ataaaactac | 60 |
| gatagcag | gatagatggt | aaccaagagg | gaactcagga | cccgtaacta | ccagctggaa | 120 |
| acacctgacc | tccagcctgc | aaatgtgaca | agctagacca | acaccagcag | gacactgaac | 180 |
| acagcttgca | gggatgagtc | tctgcgtcat | tctggacat | gtgtccaagt | aaccagaaca | 240 |
| actcaaaatg | ccaccaggcc | cttgcgtgca | ttcccataaa | cctcgaacag | tgagttgggt | 300 |
| cttcaaggaa | cctgtctctg | tcagcttacc | ttatgctgca | taacaaacag | gccccaaagt | 360 |
| cttggcagcg | tacatcaagc | atggaggatc | tctcaqtcac | cacgacagtc | ccttcgctgg | 420 |
| agggctgggg | ttgtactcca | ttttctcttt | tggaaggggc | ggccctgtgc | tgaggtctca | 480 |
| tttgtctcac | agcagaggga | tgaacggca | ggaccctggc | tttgacgggc | tccatttggc | 540 |
| aatggtacat | gccaaagtgg | tcacgtttca | ctgcccagag | caagttaacat | ggccacgtct | 600 |
| gatattgacg | tgccgggaaat | gcagaatctt | cctgcatttg | gggaggcaga | tatttggaca | 660 |
| acatgcaatt | cattacaggg | ccagctggat | gaagaacggc | caaggggcca | ggctcttcac | 720 |
| cccagaccag | gccgaaccag | ccggggccgt | gagatcaagc | cacggctcatc | agtggtcggt | 780 |
| tggaattatg | ccttgctcct | gccgtgtcca | cattgtagta | gggtttctgt | tttttaattc | 840 |
| atctgaaatt | ggtggtgggt | gtggtacaca | gatgagaaac | aggaactctc | cacgctgggc | 900 |
| tttaacagga | gctgcggtgg | gaacacaaat | ggtgcagcca | ctttggaaga | tagtttgggtg | 960 |
| gctccttaca | aaactaaatg | tacccttcac | atatgatccg | ccacacacca | tccagcaatt | 1020 |
| gtaccctctg | gtatttggcc | agatgagtc | aaaacttgca | tccacacaaa | aacttgcacg | 1080 |
| tggtggttga | tagcagcttt | attcataatt | gccccaaact | ggaagccttc | aggaggtgag | 1140 |
| tggttaaaaa | aactgtgggt | cctccggtca | gcggaatatt | attcagtgct | aaaaagaaat | 1200 |
| gagctcaagt | catggaaaga | catgaaagaa | ccttaagtat | tattaagtca | aagaagccaa | 1260 |
| tctgaaaagg | ctgatgctgt | atgagttcac | atctatgaca | ttatagaaaa | ggcaaaacta | 1320 |
| caaagacagt | aaaaggatca | gtggttgcag | gagctagggg | ggagggaggg | atgaataggt | 1380 |

| | | | | | | |
|------------|-------------|------------|------------|-------------|------------|------|
| ggggcacaga | ggatTTTTtag | ggcagtGaaa | ctaccttGta | tgatactGta | atggtggaca | 1440 |
| caggacagta | agcatttGtc | ctttatcccg | tagaatgtac | ggcactgaga | acggaccctc | 1500 |
| ctgtaacata | tggactttca | gttataatat | tgaatccctt | tcgggggttcc | gtaccgcccg | 1560 |
| cagcgccctt | taactcccg | ccccgcccgc | ctcaccgccb | ccttcccctg | ctacagcgcg | 1620 |
| ctcgccccgc | ggccgccaat | cagccgGcg | ccccggcctc | gcgcccgcgc | ccgcccccg | 1680 |
| tgggtgtGcg | cgccggccaat | ggcggtGcg | cgggggcccg | gccgcggcg | ggcggggag | 1740 |
| cggggcgcc | gccaatcgcc | gtggtgttGt | tGaaactGaa | aatactacat | tatgctaate | 1800 |
| gcggccgggc | ccgcgcGcac | gggggtggg | cccgcgcGta | taaagggggc | gcaggcgggc | 1860 |
| tgggcgttcc | acaggccaag | tgcgtgtGc | tcgaggggtg | ccggccaggc | ctgagcgagc | 1920 |
| gagctagcca | gcaggcatcg | agggggcgcg | gctgccgtcc | ggacgagaca | ggcgaaccgc | 1980 |
| acgcagaaga | gtccaccacc | ggacagccag | gtagccgcgc | cgtccctcgc | acacgcagag | 2040 |
| tcgggcggcg | cggggtctcc | cttgccccc | gcctccgcgc | tctcctcctc | tcctttcccc | 2100 |
| ttcttctcgc | tgtcctctcc | tctctcgtGt | cccggtttGt | cgcagccccg | ggccatgtcc | 2160 |
| gacgcgtccc | tccgcagcac | atccacgatg | gagcgtcttG | tcgcccgtgg | gaccttccca | 2220 |
| gtactagtGc | gcaccagcgc | ctgcgcagc | ctcttcgggc | cgggtggacca | cgaggagctg | 2280 |
| agccgcgagc | tgcaggcccc | cctggccgag | ctgaacgcgc | aggaccagaa | ccgctgggat | 2340 |
| tadgacttcc | agcaggacat | gccgctGcg | ggcctggac | gcctgcagtg | gaccgaagtG | 2400 |
| g | | | | | | 2401 |

<210> 47

<211> 1508

<212> DNA

<213> Homo Sapiens

<400> 47

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| attctacaat | tataaacatt | tagtGtattt | tGcaaataG | gcataaacctg | ttggcataaaa | 60 |
| attccattgt | tccagaaaat | atcggttaata | aaattataga | aaagttaaag | atcttcattt | 120 |
| cttatttGga | agcgtttggg | agacatttca | gaaacggatg | ggaaatgtta | aattctgcatt | 180 |
| gcctgtttat | ttttctttcc | acaccgacta | gatgtaaacg | agtgtcacca | aaagtacacc | 240 |
| acaggcaccc | acacagattc | cttcacataag | ggatccacaa | agtttagatg | tGaaatgtac | 300 |
| cctaaagggt | tcctagccgt | ctctcatccc | tcctctgtg | aaacagggaa | gacacatgtg | 360 |
| ttttcaagg | cagagatgga | acttgggcca | atgggccggg | gggtgggggg | aagtTggaag | 420 |
| ggactgcctt | aggacatggc | aggatagtgg | attgtttctg | ccgccttGtt | gcccataccg | 480 |
| gggctctctg | caggcgcgtc | ggctccctcc | ccccctgctg | agaagaagcc | ctgccaaaac | 540 |
| atccgcctcc | cccgggaacc | cccccgTggg | ttcaaagcgg | gaaaatgttg | cctcaggttt | 600 |
| aaaataatct | gtccaagccc | cccagcgGcg | gagaaacggt | cttactcgct | ctctgcccc | 660 |
| gggggtgtc | cccgcctctc | gctgccagaa | ccttggggag | tgcctagacc | cggggcagca | 720 |
| caGgtccggg | ccaaccgGga | gcagaacaaa | cctttgggtg | gcggccagga | agctccctcc | 780 |
| cagccaccgc | ccccctccag | tgcctttttt | tccccccata | caatacaaga | tcttccctcc | 840 |
| cagttccct | taaagcacag | cccaaggaaa | cctcctcaca | gttttcatcc | agccacgggc | 900 |
| gcattgtct | gggggcaaat | acgtagactc | ggaggtaggc | atccgtgggg | gggcgcgggc | 960 |
| cggggcgtGc | ggggaagtgt | ccgttctGc | tatctGctc | tccaaatate | ccgactgctg | 1020 |
| atctggcccc | ccagccctct | ttccacttcg | gagcactcct | ctggcgTtgg | caccgctgaa | 1080 |
| gaatgggcct | gggcggggag | gtgaagagaa | gccaggaaatg | ttttatgttt | toctaattgga | 1140 |
| gagggggcct | cgggagcccc | tgagctagga | ggacacggaa | aaggggattg | gggtcctgag | 1200 |
| attgggtctg | ttgggccc aa | gacgcgtttt | ctggatgggt | ctaggatgct | cccctgtGc | 1260 |
| gggaaccccg | cggTccggcc | ctgcctgctg | ggggttcGaa | aaagtggatt | gcagggtgga | 1320 |
| aggtgttatt | taccogagtc | ctggggacag | tccccgggac | tctccgcca | gcgocaaaa | 1380 |
| cggcaggtcc | ccaagcgGcg | cgcggtgttt | ttgcacttcc | caaaattctt | gaaacatctc | 1440 |
| aaaaatcctt | ctgcattctg | gcgtctggca | gggttttcca | aaaaaagtaa | acctccctcc | 1500 |
| caaatgca | | | | | | 1508 |

<210> 48

<211> 1984

<212> DNA

<213> Homo Sapiens

<220>

<221> unsure

<222> (9, 17, 18, 33, 41, 49, 50, 52, 54, 62, 80, 84, 127, 157, 159)

<223> unknown base

<220>
 <221> unsure
 <222> (175, 207..209, 214, 1181)
 <223> unknown base

<400> 48

| | | | | | | |
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| agcttcagnc | atcactnnca | tctttatcaa | tgncccttggg | nccacagggn | gngncccttet | 60 |
| gnccaaacag | cagccaatgn | aggnatctta | aaaggcacat | cactttatat | ttattcagtg | 120 |
| gttatgncat | cacttaatcc | tcaccacaac | cttgtgngnt | cagtacaatt | tgtgntttca | 180 |
| ttttatctgt | gaacaaatgg | aggcagnnnt | ttgngtaatt | tacaagtaag | tggcagatcc | 240 |
| gggggctgtg | cctagacaat | gtggctccag | actccttgcc | cctccctgcc | ttctgctgca | 300 |
| tcttgattga | gtctagccat | ctattttcttt | aacacacact | aattgctgtc | tccatgttcc | 360 |
| aggccctgtg | ccagatgcta | ttgtatgcat | cccatccact | ggatcttggc | atgggtccatt | 420 |
| gctcagtgctc | ctgctatggt | acgtgttaca | taatgcattt | attccggtat | ttagcccatg | 480 |
| gaaaataatg | ctgaaagaca | ttgtatgcat | gtttctacaa | caaaactatg | taacttatgt | 540 |
| ttctttttatt | gctttggcta | tcaggaagct | cttatccaaa | tcagagcaaa | tacattagaa | 600 |
| tttgggcttg | tcatttcagt | ttgtggaact | tttccctctg | gcccagattt | tctattttgg | 660 |
| ttcataaaatt | ctattgcaca | aatgtccttt | attgtaaaac | accttaaatt | ctttctaagg | 720 |
| gaaggctgca | tggaaatgat | acagtaaggt | cttccctgca | ttttcttaga | ttcctattag | 780 |
| ggaaggcaga | cctagatgtc | cctcttacct | tcagtcacca | agccccccat | ttataaaatc | 840 |
| ctttaagcag | tgactactgc | tgttctgagt | acctggaggt | agttcagagc | ttctgaaagg | 900 |
| taaaatccat | atacaaaaag | aagttcotte | cgatccagat | cccagctttg | gtgccagatg | 960 |
| cacatttgag | gagtaggtgg | ctagtccagac | tctcacctga | gcagttaata | aaatctattg | 1020 |
| ccccttaatg | gaatttttttc | tgcaagctcg | aattgatctg | tcatctttgt | gatttgtgag | 1080 |
| atggcagggg | agcaccaaac | accatcatga | cttggggccac | agtgggtggg | aaaaaggaaa | 1140 |
| aaagaaaaaa | aaaatccact | gccaagcctt | gccaggcgta | naaagggctg | gaactgctgg | 1200 |
| ggccatttta | tctgatttat | tggaaataga | gtggatctta | ttaacatttt | aataaagaga | 1260 |
| atcttttttg | actaggctgg | aagtggccgc | cagtcccccg | tgcaattcca | ttctctggaa | 1320 |
| aagtggaaatc | agctggcatt | gccagcgtg | atttgtgagg | ctgagcccca | acagtccaaa | 1380 |
| gaagcaaatg | ggatgccacc | tccgcggggc | tcgctcctcg | cgaggtgctc | accccgatc | 1440 |
| tgccatgcaa | aacgagggag | cgtaggaag | gaatccgtct | tgtaaagcca | ttggctcctg | 1500 |
| tcacagcct | ctaccaatg | ctttcgtgat | gctgctgctg | atctattttg | gaagttggct | 1560 |
| ggctggcgag | gcagagcctc | tctcaaagc | ctggctccca | cggaaaatat | gctcagtgca | 1620 |
| gccgcgtgca | tgaatgaaaa | cgcegcggg | cgcttctagt | cggacaaaat | gcagccgaga | 1680 |
| actccgctcg | ttctgtgctg | tctcctgtcc | caggtaggga | agaggggctg | ccggggcgcc | 1740 |
| tctgcgcccc | gtttctgcat | tcggatcgcc | cggcacgggc | agggtgaggg | ggctttcggg | 1800 |
| gggtcggggc | ctccggtcgc | ggcggcgaag | acagatcggg | gctcggtagg | gaggtcattc | 1860 |
| cgagcccgag | gatcctaggg | acccccaca | cacaggctcc | cactctggcg | tgcgtgcgtg | 1920 |
| tggtgtgtgt | tgtgtgtgtg | tgtgtgtgtg | tgtgtgtgtg | tgtgtacgtt | cgtaaacggg | 1980 |
| ggga | | | | | | 1984 |

<210> 49
 <211> 17897
 <212> DNA
 <213> Homo Sapiens

<400> 49

| | | | | | | |
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| acattgcaca | actcttcatt | tatgtttcaa | gtaaaggatt | tattacacat | cctgaacata | 60 |
| gcctaccctt | caccttcatt | tggaattggt | ttcctttcat | ggtttttttt | ttttttaatt | 120 |
| ttcattgctc | acaacatgat | attacaggcc | aggcatgett | gcagataact | gggataattt | 180 |
| actttttact | aagtaaaaaat | cccagatggc | agtccctcca | cctgggatca | tgaagcaggt | 240 |
| aggatcccct | tttccctcct | aacagagtc | aagcagtaag | accgaataag | atgggatgaa | 300 |
| ttcaaagaga | aacatctgca | tttgctcagt | tcttcaacca | atatttactg | aacttctcta | 360 |
| cggtcaggtg | tgcaagatgc | caggagggat | gagacaagat | gatgatgatg | atgatgatga | 420 |
| tgatgatgat | ggtgatgatg | acagtgagga | tgagggtgaa | cactttaatg | agagccttct | 480 |
| atatgccagg | gactgttcta | ggcactttac | atatattaac | acatatattt | atcacaatga | 540 |
| ccctgtattg | ttatgtgtat | cttatacatg | aggaggcaga | ggaaggaaat | gaaataactt | 600 |
| goccaaagagc | atagagtctg | caagtggcaa | agataagata | gaaataattc | tccaagagca | 660 |
| gagagtgggtg | acttctgggg | atagggaagt | ggaaaagtgg | ggagacaaag | gctgttggtt | 720 |
| ttcctaacaa | gttttgaaaga | cttatttgac | caggttcaag | aaaaacttga | taatcactac | 780 |
| aaagtaaaaag | gaagaggaga | tgagggtgggc | ctttgggttac | agatgcttgt | tttggaaggt | 840 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ttagggagga | aggggtgaga | ggaactgggc | tgcagtacag | gaatggggga | cttgggaato | 900 |
| agaggggatt | ggtaggggtg | ggtcattgat | tgcagtgaat | gtttacttgt | tgattgggct | 960 |
| gcagtacagg | agtggggggc | ttggaattaa | gaggggattg | gtttaggggtg | ggtcattgat | 1020 |
| tgcagtgaat | atttacttgt | tgattagttt | gatccagaag | aaagggagag | atggatgctg | 1080 |
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<211> 2987

<212> DNA

<213> Homo Sapiens

<400> 50

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| tctgataagg | aagacaatga | tgatgatcac | ttcaaaatga | attcaggatt | gtaatgtaaa | 180 |
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| caccgggctt | acgcaatttt | tttaagggga | gaggagggaa | aaatttgtgg | ggggtagcaa | 1920 |
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<211> 5683

<212> DNA

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| gggcagaaag | tgaggtgta | gcaggaaacc | tttgcatgct | tgcgcttaca | ttggagctgc | 2820 |
| gaggtatttg | agaaatatta | aacgggatgg | ttttctgggt | tcactgtttt | gaaagagcac | 2880 |
| caatcctagg | ggaaacactg | aaacagaagc | tttgtcatca | ttaaaagaaa | aagtcttact | 2940 |
| aggatgagga | agaaataact | ttatgagaaa | gaatgagcga | gaaagcaata | aatcaaatgg | 3000 |
| tgactgcagg | ggaatcgctg | attcctggca | aaggtgccat | gaggtcgcac | tggtctcccg | 3060 |
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| tctttgcttc | cctaagcttc | aaggtagtac | aggggagtgg | agaaaaagaa | cactttgcgg | 3300 |
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| ggcggaaccg | acttcagtgg | gcgctgactc | ctccatttct | ggacaggctt | ctgtggagtg | 3420 |
| ggtcaggcac | tcttcttgct | cgctcgggtt | ccttcagatt | ctgacggcga | acgcttgga | 3480 |
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| cctagctggc | atagcatttc | ggtttgacag | cctgtagtat | actgggcaga | attgtggtgt | 3600 |
| aatttccttg | gcattttaaa | ctccgttaac | atgcctgggt | attgtccctc | agggtgggtc | 3660 |
| tgttctagtt | ttagcaagtg | tgtatgtaat | ttttcatctt | ctgtgaatat | aattttgctg | 3720 |
| tagttaaatc | tggtctgtaa | taaagtgtct | ttcaaagatg | tatataagct | gaagtgtatg | 3780 |
| taactttaga | gaggagggaa | tgaccaactg | taactcaggg | tgaaagcctg | tatagttcct | 3840 |
| agttattact | gatgtaaatg | ccaaaaggaa | aattattatg | catcattcta | atttatcctt | 3900 |
| tacaaagaca | agttgagata | tgcaacccta | ttagatttgg | gtcaatagat | tggtctcttt | 3960 |
| tttggcagtt | tctaaatttg | gcattttaat | aaaactcaac | atgtttctat | aacttcttga | 4020 |
| ttcatgcgta | catgtgtggt | gtttttgaaa | gaataagttt | cactttgcta | ttgcctaata | 4080 |
| actttttaga | tgctttatta | tggttaataat | tatgagcctg | caaaaacaat | ttttggaaat | 4140 |
| gttgatggct | ttgtagtcca | acacagactg | gtttgcttca | ttcctagccc | ttgcattggt | 4200 |
| ttaggaaata | actaacttaa | atgtgaagtt | gacatttgca | atcaagaaat | tacatattta | 4260 |
| ccagatatatt | ttaaaggggac | tgcataaact | aaagagaata | aactggtttt | gcagatagggt | 4320 |
| tgtcaagaac | ttggcaccoc | gcttccacc | ctgttaactt | agaggtgatc | aatcttcatt | 4380 |
| tgagccaaac | agaccatcac | agaaaacact | gtgcctgttt | atctttatta | ttgaggcttt | 4440 |
| tttccctctt | tgtctggata | cattttcaaat | aaggggttgt | ttcagtcggt | gaagcaaaag | 4500 |
| caattataa | gatggggaaa | tggtaaaagg | gtattcagag | atcatcacta | gctcttttcc | 4560 |
| aaaatgtgga | gtttttgtggt | cataaatatt | gtccaccctaa | tgagcaaaa | ataaaaaataa | 4620 |
| aaaaaaaaaca | ggaagcaaat | gttaagcttt | cattcaccac | tgtcagtatt | aacgcaagct | 4680 |
| ttaaaaataa | gcactatcag | aaaaggatac | taaaggagaa | ttgactagaa | aagaattgtg | 4740 |
| gaaaatggaa | acgaatatgt | atcacttaac | tagattttga | ggttatcagt | agacagtgc | 4800 |
| cttgcagtac | agctatatgt | gttggaattt | aaatttagga | caagtatttt | aaagcttcaa | 4860 |
| agttagtgctt | ttttttgtta | aaaatctgta | agatgtttta | atgactggag | tgttctcttt | 4920 |
| gaatttgagg | | | | | | 4930 |

<210> 55

<211> 2501

<212> DNA

<213> Homo Sapiens

<400> 55

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| actcttgacc | tcaggtgatc | caccgcctt | ggcctctcaa | agtgtggga | ttacaggcgt | 120 |
| gagccaccaa | gcctgacggg | tagtaattta | ttttttatat | aatttttttc | ttcttttttt | 180 |
| ggtagagacg | aggttttgcc | atgttgctca | ggctggtcta | aaactaccgg | gctcaagtga | 240 |
| tctgcctacc | cgggcctccc | aaagtgcagg | gatcacaagc | atgaaccacc | atgcctggct | 300 |
| gtaatttttc | atatattcog | gatattaacc | ctttaccaga | taatacagtt | tgcaaacttt | 360 |

| | | | | | | |
|-------------|-------------|------------|------------|-------------|-------------|------|
| ttttttcccc | attctgtagg | ttgcottttc | actgttggtc | atttcttttg | ctgtatagct | 420 |
| atccttaagt | ttgttgcaaa | cccatttgct | tatcttttgt | cttgttgccct | gtgttttgct | 480 |
| gtcatatcca | agaaatcatt | gccaaatcca | ttgtcatgaa | gctttttcccc | atgttttctt | 540 |
| ctaggagcac | tatagtttca | ggtcttatgt | ttaatcttta | ataagttttg | tgtttttgta | 600 |
| tatggtgtaa | ggtaagggtc | caacttcatt | cttttgtagt | tggttatata | gttttctcag | 660 |
| caccatttgt | taaagacaca | atctttcccc | catgttctgg | tgctttaaaa | aaaaaaaaaa | 720 |
| ttctggctgg | ttacgggtggc | ttaggcctat | aatcccagca | ctttgggagg | ctgaggcaag | 780 |
| tggactgctt | gaggctagga | gtcccagact | agcctggcca | acatggtgaa | accctgtctc | 840 |
| taccaccgaa | gatacaaaaa | ttagccaggc | gtggtggaat | acgcctgtaa | tcccagccta | 900 |
| ctaggaggagc | tgaggcatga | gaatcgcttg | aacctgggag | gcagagggtg | cagtgaacca | 960 |
| agatctcacc | actgcacgce | agcgggggtg | acagagttag | gcagggtctt | accctgtcgc | 1020 |
| ccaggcagga | gtccagtggc | ccaatcatgg | ctcattgcag | cctacactgc | cagggttcaa | 1080 |
| gccatcctcc | cacctcagcc | tccaagttag | ctaggattac | aggtgtgtgt | caccatgccc | 1140 |
| agcaaactct | tgtatttttt | gtagagatgg | ggtagcccta | tggtgtcag | gctgggtctt | 1200 |
| aactcctaac | ctcalagcgat | cctcccacct | gggcctctca | aagcactggg | attacaggcg | 1260 |
| tgagccactg | cgcttgacat | gggtgcttct | aatttattct | tactttttat | ttttattttt | 1320 |
| ttgagacaag | gtcttgctct | gtctcccagg | ctggaatgta | gtggtacaat | catggctcac | 1380 |
| tgcaacctct | gcctctccgg | ttcaagtgat | cttcctgcct | caacctctgg | agtagtttgg | 1440 |
| actatgggca | catgccacaa | cgactagcta | atttttggtt | ttcttttttt | ctttctttct | 1500 |
| ttctttcttt | tttttttttt | ttgagatgca | gtttctctat | gttacctagg | ctgggtctaaa | 1560 |
| actcctgggc | tcaagcgatc | ctcccacct | ggcctcccaa | agtgtctggg | tgacaggcgt | 1620 |
| gagccacgtg | gtgcttaaaa | aaggcaacaa | aaaaccccc | acacactggg | tatagaagtg | 1680 |
| gcatgggcct | ctatacactg | tgagattctt | ggtagtagct | acaaattctg | tgtatactca | 1740 |
| agattttcta | gagtaggtgc | aattaccccc | ttttacagat | gaggacacag | aggctgagcc | 1800 |
| gtagtgaacc | acctaaggct | gtatagccag | caaatagatg | gaggttggat | tggaactgag | 1860 |
| gactttactc | aagggtctct | acaaaacctt | gggggcttct | cgctgcttta | tcccctcac | 1920 |
| acctgaaaga | atgaatgaat | gaatgcctcg | ggcaccgtgc | ccacctccca | gcaaaccgtg | 1980 |
| gagcttgga | gagcccaact | ctccgcgtgg | ggggggtgtg | tgcccgcctt | gcgcagtgcg | 2040 |
| gttcctctgg | catggccggc | tccgttccat | ccttctgcac | agggtatcgc | ctctctccgt | 2100 |
| ttggtacatc | cctcctctcc | ccacgcctcg | actggggtgg | tagacgcgc | ctccgctcat | 2160 |
| cgccctctcc | catcggttcc | cgcgcgaaaa | gccggggcgc | ctgcgctgcc | gcgcgcgcgt | 2220 |
| ctgctgaagc | ctccgagatg | ccggcgcgta | ccgcccagc | ccgggtgccc | acactggccg | 2280 |
| tcccgcccat | ctcgctgccc | gacgatgtcc | gcaggcgcta | ggtaccatgg | gggggaacac | 2340 |
| ggactcaggg | ggacagggag | ggcgctgggt | ggggggtcgc | ttcccctcgg | ggtggccggg | 2400 |
| ggcgctgct | gacagacggg | cgcgcatgcg | tggggtggtg | cggcgcgcag | cggcagttgg | 2460 |
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<210> 56

<211> 3814

<212> DNA

<213> Homo Sapiens

<400> 56

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| gggaggggct | gccaaagtgc | ctgcctactg | gctgcttccc | gaatccctgc | cattccacgc | 120 |
| acaaacacat | ccacacactc | tctctgccta | gttcacacac | tgagccactc | gcacatgcga | 180 |
| gcaatttctt | tcttctcttc | tcaactctctc | ggcccttgac | ttctacaagc | ccatggaaca | 240 |
| tttctggaaa | gacgttcttg | atccagcagg | gtaggcttgt | tttgatttct | ctctctgtag | 300 |
| ctttagcatt | ttgagaaagc | aacttacctt | tctggctagt | gtctgtatcc | tagcaggag | 360 |
| atgaggattg | ctgttctcca | tgggggtatg | tggtgtctct | ctttttcttt | caggacttgt | 420 |
| aggattcttt | gtgccatttg | catataattt | ggcaggttca | cattttttta | gagcctatg | 480 |
| aagtgccttt | tgcattgtgt | ttaaaaaggg | atttgaaaat | tgaaagtgtg | atttatggaa | 540 |
| attaaatcat | ctgtaaaaaa | ttgcttttga | aagtaatgat | tgctggccat | aaagggaat | 600 |
| atctgcgatg | cacctaatgt | gttttttaacc | ctttatttgc | tgacaatcta | tagtcattaa | 660 |
| tgctaaactc | gatttttggt | tcagctacat | ttgcatattg | tccaacaatg | gtctattttt | 720 |
| gtaagaatta | gataaaatgt | atacttgata | taaaatagtc | aaaaatgtaa | ctcttagtaa | 780 |
| cagtaagctt | ggcattttag | tagaccatga | acacttcgtc | agatactctg | ttgggtgttt | 840 |
| gggatagcaa | ttaaaacaaa | gtattgatag | ttgtatcaga | gtctattagg | ctgcagcaaa | 900 |
| ggaagtttat | tcaaaagtat | aaactatcca | agattataga | cgcatgatat | acttcaccta | 960 |
| ttttttgtct | ccttaatatg | tatatatata | tatatatata | tatatatata | catatatgtg | 1020 |
| tgtgtgtatg | tgcgtgtgca | tgtttaactt | ttaattcagt | taaaaacttt | tttctatttg | 1080 |
| tttttcatct | ggatatttga | ttctgcata | cctagcccaa | gtgaaccgag | aagatcgagt | 1140 |

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| tgtaggacta | aaggatagac | atgcagaaat | gcatttttaa | aatctgttag | ctggaccaga | 1200 |
| ccgacaatgt | aacataattg | ccaaagcttt | ggttcgtgac | ctgaggttat | gtttggtatg | 1260 |
| aaaaggtcac | attttatatt | cagttttctg | aagttttggt | tgcataacca | acctgtggaa | 1320 |
| ggcatgaaca | cccatgtgog | ccctaaccac | aggtttttct | gaatcatcct | tcacatgaga | 1380 |
| attcctaatt | ggaccaagta | cagtactgtg | gtccaacata | aacacacaag | tcaggctgag | 1440 |
| agaatctcag | aagggttgtg | aagggtctat | ctactttggg | agcatttttg | agaggaagaa | 1500 |
| actgaggtcc | tggcaggttg | cattctcctg | atggcaaaat | gcagctcttc | ctatatgtat | 1560 |
| accctgaatc | tccgccccct | tcccctcaga | tgccccctgt | cagttcccc | agctgctaaa | 1620 |
| tatagctgtc | tgtggctggc | tgcgtatgca | accgcacacc | ccattctatc | tgccctatct | 1680 |
| cggttacagt | gtagtccctc | ccagggtcat | cctatgtaca | cactacgtat | ttctagccaa | 1740 |
| cgaggagggg | gaatcaaaca | gaaagagaga | caaacagaga | tatatcggag | tctggcacgg | 1800 |
| ggcacataag | gcagcacatt | agagaaagcc | ggccccctga | tccgtctttc | gcgtttatatt | 1860 |
| taagcccagt | cttccctggg | ccacctttag | cagatcctcg | tgcgcccctg | ccccctggcc | 1920 |
| gtgaaactca | gcctctatcc | agcagcgacg | acaagttaaag | ttaaagttcag | ggaagctgct | 1980 |
| ctttgggata | gctccaaatc | gagttgtgcc | tggagtgatg | tttaagccaa | tgtcagggca | 2040 |
| aggcaacagt | ccctggcogt | cctccagcac | ctttgtaatg | catatgagct | cgaggagacca | 2100 |
| gtacttaaa | ttggaggccc | gggagcccag | gagctggcgg | agggcgcttc | tccctgggact | 2160 |
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| agtcacttgg | gaaggtctcg | ctcttggcat | ttaaagttgg | gggtgttttg | agttagcaga | 3240 |
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| ctgtggaagga | gcgcggccgg | tcaggacac | aggagaccac | tttgtgactt | caatggcgaa | 3720 |
| ggttgtgtgt | cctcatttta | atttttttcc | ctacaagaat | tgttctttct | ccctctcctc | 3780 |
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<210> 57

<211> 8020

<212> DNA

<213> Homo Sapiens

<400> 57

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| ggaggtggag | gtggaggttg | cgggtgagctg | agattgcgcc | actgcactcc | agcctgggca | 120 |
| acaagagcaa | aactccatct | ctcaaaaaca | aacaaaaca | aacaaaaca | aacaaaaca | 180 |
| aaaagcaatt | aaaaaatcta | ttgaagtttc | cataagaaac | aaaattttca | caatggaaat | 240 |
| tccagctgat | taaatttcta | tgtaattaaa | taagcatgag | tgacagggtt | tgtgtcttgt | 300 |
| ttagtaattt | aacaactttt | taactttctg | aaagtagaat | cacctcaatt | cttacctgaa | 360 |
| aaatttctat | aagagtttag | aaaagagcta | tgcaaaactga | cactcaagcc | atatgggttt | 420 |
| gggcaactta | tctccagtgt | ttattgtcaa | gatgacatag | gatatatcag | gccttttttt | 480 |
| ttttgcaggg | tctcactttg | tcacccaggc | tgagtgtgtg | ggtgcaatca | aagctcactg | 540 |
| aaacctcaaa | ttccggggct | caagcaatcc | tccaacctca | accccccaag | tagctgggac | 600 |

| | | | | | | |
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| tacaggcatg | cgccaccatg | cctgggcta | tttttgtatt | ttttgtagag | acagggtttt | 660 |
| accatgttgc | ccaggctggg | cttgaactcc | tgagctcaag | atccgcccac | ctcggcctcc | 720 |
| caaagtgcgt | ggattacagg | tgggagccac | cacacctggc | ctatcaggcc | tttatttagc | 780 |
| agagagaaga | tattaaagca | acacactttt | aagtttctta | tgtattattt | ctcttttctt | 840 |
| tccacatagg | aaatggctcg | aagacaatga | tatagtgtga | ttcettgaaa | tccttcttgg | 900 |
| gcagtggag | ggttcagatt | ttttccctcc | aacttaatac | gatgaagagt | gagagtaagc | 960 |
| agtatttaag | agtacacaga | caggcacaca | tatgcacttg | tattttaacc | accagggcog | 1020 |
| tgctcagtacg | gaaagcattt | aataaagatt | tgatagaccg | acttttagat | gctgaattac | 1080 |
| gtgttttagt | ggtaaagatc | tcaatggctt | tgtcaaaatt | ctagttagct | tttaagtatt | 1140 |
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| ccataaagtt | tagttttcta | ttaaagctta | tcccaggata | gtaactaact | ttcccaaac | 1860 |
| caaaaagggt | acttatttat | ttaggcgaag | tctcgctctg | ttatccagge | tggaagtgcag | 1920 |
| tagcagatct | tggctcactg | caacctccac | ctcccagggt | caagtgatte | tcctgcctda | 1980 |
| acctctgagt | agctgggatt | acaccaggcc | cagctaattt | ttgtgttttt | ggtagagata | 2040 |
| gggtttcacc | atgttggaca | ggctgggtct | aaattcctga | cctcaagtga | ttcgctgccc | 2100 |
| tcggcctccc | aaagtgtctg | gattacaggc | gcaagccact | gcacctggcc | caaaaagggt | 2160 |
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| gtctcaaact | cctgacctca | ggtgatccac | ccgcctcggc | ctcccaaagt | gctagaatta | 9540 |
| caggcgttag | ccaacgtgcc | cagcctgttt | ttgttttttg | tggtttgaag | cagggtctca | 9600 |
| ctcagttccc | caggctggag | tgacgtgaca | cgataatagc | ttactgtagc | tgcaatctcc | 9660 |
| cgggctcaaa | cgatcctccc | acotcagcct | cctgaacagt | tggaactaca | ggcacaccac | 9720 |
| cacacctggc | taattttttt | ttttcttttt | ttagtagaga | tgaggtcctg | ctatgttgcc | 9780 |
| caagctggtc | tcaaaactcct | gaggtacaag | tgactcctct | acctagcct | ccaaaaatgc | 9840 |
| tggtgattgca | gatgtgagcc | accacaccca | gcttgatttt | actttaaatg | agagtccttc | 9900 |
| ttcagagtcc | ctcagctggt | cctggcccct | ggccatgtgc | cttcagttgc | ccctgcttct | 9960 |
| gtggtatcct | taaggctaca | ttcagtgctg | aggccctagg | caggcagcag | agagaagcca | 10020 |
| aattgattctg | tccttccctt | atccaccag | agcatgcaaa | accaggagca | gtggtgggtt | 10080 |
| cagggtgggc | accagctatg | tatatgtaca | tcagggacag | ggggccaaag | gcagtcagtt | 10140 |
| ccaaagact | gccccagagg | ccatttttca | gagaagccct | gggttcctca | agggccctgt | 10200 |
| cccatgctg | gccccatctg | cagg | | | | 10224 |

<210> 60

<211> 2944

<212> DNA

<213> Homo Sapiens

<400> 60

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| acctcagcct | cccaagtagc | tggtgattaca | ggcacatgcc | accacaccca | gttaattttt | 60 |
| gtattttttag | tagagacagg | gttttgccat | gttgccagg | ctggtctcga | actcctgaac | 120 |
| tcaggtgatc | tgccacactt | ggcctcccaa | agtgtgtga | ttacaggcgt | gagccaccat | 180 |
| gccagctgg | aaataatggt | tttaagaaaa | attaaagcat | attgtaaaatt | gaatacaaat | 240 |
| agtaaatgga | gcagctgcac | tagaagagaa | taggtgagaa | agtctattat | ggtggagcta | 300 |
| ataagttgca | agtccotgg | acaaagagaa | caagaacat | aaaggtatgg | ggggctgtat | 360 |
| aaaatgacag | aaaatgttat | ttctgagact | tgtgtgacat | gccacgggtt | ctcattagtc | 420 |
| cactcctagt | gagacacccc | ccccccacaa | aaaggggaca | aagcatattg | ttctgattta | 480 |
| tagggtaaat | aaatcacagg | ttagtttaagt | gtatgaagtc | aatggacta | gaattcaaac | 540 |
| ctgggcctta | ctaccaggca | cattacttaa | ctacttgatt | cagtatcctc | atctgacaat | 600 |
| actgaccaat | ttacaggatt | actgtaagat | taaacatggt | attgcttgaa | aaccocaaagc | 660 |
| agaatgccta | actcataaaa | tggttggttaa | gtggcagctg | ttattagtaa | ggatcacaga | 720 |
| cgtattttctt | tgcaaatag | acttagagca | aaagctttag | aatctatctg | cattagtaag | 780 |

| | | | | | | |
|------------|------------|------------|------------|------------|-------------|------|
| gcctccttct | acaactaagg | attactgatt | atcaaactaa | aatggtcctt | aaggaaccaa | 840 |
| gcggagccca | cccttttctt | aatccaaggt | tgcttctgtt | tactgtctca | gcaccttctg | 900 |
| gaagcagcaa | ggcccccatt | ggagcaactc | tcactgaatc | catttgaagg | ttttgtaggt | 960 |
| cttacaacaa | accctattca | gccttgtatt | aggcatgtta | cagaaccaac | gaattcggag | 1020 |
| atgaagtcag | gtcttccagt | tcagcctgcg | aggaagacag | gtgatccgaa | tcctaagaat | 1080 |
| gcaaaagatg | ggccgggtgt | ggtggctcat | gcctgtaatc | ccagcgcttt | gggaggccga | 1140 |
| ggcaggcaga | tcacctgagg | tcgggaggtt | gagaccagac | tgaccaacaa | cggagaaacc | 1200 |
| ccgtctctac | ttaaaaatgc | aaagttagcc | gtgctgtgtg | gcccattgct | gtattcccag | 1260 |
| ctactcggga | ggctgaggca | ggagaaccac | ttgatccctg | gaggcggaag | ttgctgtgag | 1320 |
| cggagattgc | gccattgcac | accagcccg | gccacaagag | cgaaactccg | tctcaaaaaa | 1380 |
| aaaagcaaaa | gatactacca | agccctgctg | agcaaggtag | ctcacacttc | atgagcgagt | 1440 |
| taagatgggt | ttcacaattt | ttcaagcaag | gaaacgggct | cggaggtctt | gaacacctgc | 1500 |
| tacccaatag | cagaacagct | actggaacta | aaatcctctg | atttcaaata | acagccccgc | 1560 |
| ccactaccac | taagtgaagt | catccacaac | cacacaccga | ccactctaag | cttttghtaag | 1620 |
| atcggctcgc | tttgggggaa | aggtcttgag | agaacatccc | ttttaagggt | agaacaaagg | 1680 |
| tatttcatag | gtcccaggtc | gtgtcccag | ggcgccacc | caaacatgag | ctggagcaaa | 1740 |
| aagaaagga | tgggggactt | ggagtaggca | tagggcgccg | ccctccaagc | aggggtggct | 1800 |
| gggactctta | agggtcagcg | agaagagaa | acacactcca | gctcccgcct | tattcgggtca | 1860 |
| gatactgacg | gttgggatgc | ctgacaagga | atttcccttc | gccacactga | gaaatacccg | 1920 |
| cagcggccca | cccaggcctg | acttccgggt | ggtgogtgtg | ctgctgtctg | cgtcacggcg | 1980 |
| cacgtggcc | agcgcggtt | tgtggcgca | gcttctgaaa | ctaggcgcca | gaggcggagc | 2040 |
| gctgtggca | ctgctgcgcc | tctgctgcgc | ctcgggtgtc | ttttgcgccg | gtgggtcgcc | 2100 |
| gccggggaga | gcgtgagggg | acagatttgt | gaccggcgcg | gtttttgtca | gcttactccg | 2160 |
| gccaaaaaac | aactgcacct | ctggagcggg | ttagtgtgtg | tggtagtggg | ttgggacgag | 2220 |
| cgcgtcttcc | gcagtcocag | tcagcgtgg | cgggggagcg | cctcacgccc | cgggtcgctg | 2280 |
| ccgcggcttc | ttgccctttt | gtctctgcca | accccaccc | atgcttgaga | gaaaggtcct | 2340 |
| tgcccgaagg | cagattttcg | ccaagcaaat | tcgagccccg | ccccttccct | gggtctccat | 2400 |
| ttcccgcttc | cggcccggcc | tttgggtctc | gccttcagct | caagacttaa | cttccctccc | 2460 |
| agctgtccca | gatgacgcca | tctgaaattt | cttgaaaca | cgatcacttt | aacggaatat | 2520 |
| tgctgttttg | gggaagtgtt | ttacagctgc | tgggcacgct | gtatttgcct | tacttaagcc | 2580 |
| cctggtaatt | gctgtattcc | gaagacatgc | tgatgggaat | taccaggcgg | cgttgggtctc | 2640 |
| taactggagc | cctctgtccc | cactagccac | gcgtcactgg | ttagcgtgat | tgaaactaaa | 2700 |
| tcgtatgaaa | atcctcttct | ctagtgcac | tagccacgtt | tcgagtgtt | aatgtggcta | 2760 |
| gtggcaccgg | tttggacagc | acagctgtaa | aatgttccca | tcctcacagt | aagctgttac | 2820 |
| cgttccagga | gatgggactg | aattagaatt | caaacaaatt | ttccagcgt | tctgagtttt | 2880 |
| acctcagtca | cataataagg | aatgcacccc | tgtgtaagtg | cattttgggt | ttctgttttg | 2940 |
| caga | | | | | | 2944 |

<210> 61

<211> 3862

<212> DNA

<213> Homo Sapiens

<400> 61

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| tttatgccct | gctgccccta | gccgacttcg | gcccgttctg | cgctcggggc | tgggccaggg | 120 |
| cgcacgcggg | gctcggggcc | cctcgccccca | cgggatggga | gaggccgggt | gatagctccg | 180 |
| ggccccataa | atcatccagg | cggccgcggg | gtcgggattt | tatgaatgaa | aaagcagctg | 240 |
| ggccgcctt | gtgcgcgggc | tgatgctatg | aggtttgggt | atgcgggggc | caacgcgatt | 300 |
| gtgggtgctc | ggggagtggg | ggggggcacg | accgtagggt | ctccctgctg | gggcaaccca | 360 |
| tcgtccccca | tgcggaatcc | gggggtaatt | acccccacg | gaccgggaat | attagtaatc | 420 |
| ctaattcccg | gcgggggagg | gggcgcggga | ggaattcacc | ctgaaagggtg | gggggtgggg | 480 |
| gggtcgcac | ttgctgtgag | caccctggcg | aaggggagag | ggctttttct | atcagttttc | 540 |
| tttgagcttt | tactgttaag | agggtagcgt | ggtttgatga | cactgaacta | tattcaaaag | 600 |
| gaagtaaatg | aacagttttc | ttaatgtggg | gcaggtactg | taaaaataaa | aacaaaagtt | 660 |
| aagacagtaa | aatgtccttt | tattttttta | tgcaccaaag | agacagaacc | tgtaatttta | 720 |
| aaaactgtgt | atttttaattt | acatctgctt | aagtttgcca | taatattggg | gaccctctca | 780 |
| tgtaaccacg | aacacctatc | gattttgtca | aaaatcagat | cagtacactc | gtttgtttta | 840 |
| ttgataattg | ttctgaatta | tgccggctcc | tgccagcccc | ctcacgctca | cgaattcagt | 900 |
| cccagggcaa | attctaaagg | tgaaggagcg | tctacacccc | caacaaaacc | aattaggaac | 960 |
| cttcgggtgg | cttgtcccag | gcagagggga | ctaataattt | cagcaattta | atttcttttt | 1020 |
| taattaaana | aaatgagtca | gaatggagat | cactgtttct | cagctttcca | ttcagaggtg | 1080 |

| | | | | | | |
|-------------|-------------|-------------|------------|------------|-------------|------|
| tgttttctccc | ggttaaattg | ccggcacggg | aagggagggg | gtgcagttgg | ggacccccgc | 1140 |
| aaggaccgac | tggtcaaggt | aggaaggcag | cccgaagagt | ctccaggcta | gaaggacaag | 1200 |
| atgaaggaaa | tgctggccac | catcttgggc | tgctgctgga | attttcgggc | atttatttta | 1260 |
| ttttattttt | tgagcgagcg | catgctaagc | tgaaatccct | ttaactttta | ggggttaccc | 1320 |
| ccttgggcat | ttgcaacgac | gcccctgtgc | gccggaatga | aacttgcaca | ggggttgtgt | 1380 |
| gcccggctct | ccccgtcctt | gcatgctaaa | ttagttcttg | caatttacac | gtgttaatga | 1440 |
| aaatgaaaga | agatgcagtc | gctgagattc | tttggccgtc | tgtccgcccc | tgggtgccct | 1500 |
| cgtggcggtc | ttggaaatgc | gccattctgt | ccggcttgga | tatgggggtg | cgccgcgccc | 1560 |
| cagtcacccc | ttctcgtggt | ctccccaggc | tgcgtgtggc | ctgccggcct | tcctagttgt | 1620 |
| cccctactgc | agagccacct | ccacctcacc | ccctaaatcc | cgggggaccc | actcgaggcg | 1680 |
| gacggggccc | cctgcacccc | tcctccctgg | cggggagaaa | ggctgcagcg | gggcgatttg | 1740 |
| catttctatg | aaaaccggac | tacaggggca | actccgcgc | agggcaggcg | cggcgcctca | 1800 |
| gggatggctt | ttgggctctg | cccctcgtct | ctcccgcggt | ttggcgcccc | cgccccctcc | 1860 |
| ccctgcgccc | gccccgccc | ccctcccgct | ccattctct | gccgggcttt | gatctttgct | 1920 |
| taacaacagt | aacgtcacac | ggactacagg | ggagttttgt | tgaagttgca | aagtccctgga | 1980 |
| gcctccagag | ggctgtcggc | gcagtagcag | cgagcagcag | agtccgcacg | ctccggcgag | 2040 |
| gggcagaaga | gcgcgaggga | gcgcggggca | gcagaagcga | gagccgagcg | cggaaccagc | 2100 |
| caggaccac | agccctcccc | agctgccag | gaagagcccc | agccatggaa | caccagctcc | 2160 |
| tgtgctgcga | agtggaaaac | atccgcgcg | agaccccgga | tgccaacctc | ctcaacgacc | 2220 |
| gggtgctgcg | ggccatgctg | aaggcggagg | agacctgcgc | gccctcgggt | tgctacttta | 2280 |
| atgtgtgca | gaaggaggtg | ctgccgtcca | tgccgaagat | cgtcgcaccc | tggatgtgg | 2340 |
| gggtgcgggg | ctggggggcg | ctctcttaag | acttccctgc | aacttgttgc | ccagaccac | 2400 |
| gtttctttgc | tactcaccct | cctcccttct | ctcccgctag | aactttgaag | tttgcctgg | 2460 |
| tgtttctagg | gatccgtatt | ttcaaaaata | aaattgcggg | tattttctga | aggaggaagg | 2520 |
| ggtgggggtg | gggtgcttag | aagtagcggt | tcgtgggagg | ggagaagggg | gtccgggagg | 2580 |
| ggtgccttcg | ggagaagcca | gtgccagggg | caccccaatg | ggcccgaggg | tgcgggctgg | 2640 |
| caggctgggt | gcgctttgtg | tcccccgcct | gcgcgccagc | ccggctgcgc | ctcagcggcc | 2700 |
| gggagccgcc | aactccgggg | ggagggggca | tagatttgat | ttttaaatta | atatccatgg | 2760 |
| acacgtatgc | aagggccgct | cgtagccagta | ttatgcacca | tctttgctct | tttattgcaa | 2820 |
| agcaaaagtg | tttattaata | attgggggca | gggtgggggc | ggggagcggc | cgccggcgcc | 2880 |
| tgggggccgca | gctaagggcc | gcgcggctgc | cgggagcccg | cgggaggggc | gcagggacgc | 2940 |
| ggcatgggta | gttttggggg | gacgccgcta | gggaaggggg | ggcctttgtt | caagcagcga | 3000 |
| gtcccggggc | gcccgaacg | ggcagcctgg | gccggagagc | acggcgagct | gcaaggtcgc | 3060 |
| gtggccccc | agacgccagg | gcttgatccc | cgtctgcagg | gatatcggt | tggaggacct | 3120 |
| tctccgagcg | agccgggggc | ctgggagcac | attttcagac | cttcggtggg | cgccctgagg | 3180 |
| gcccgcgaag | attttaaaat | aatttttgaa | agtgcggcgt | ggtgcccttg | cgagagggaa | 3240 |
| acgcgcggcg | cgcccagggg | gaaggggggg | ccccggagtt | tgaattcctg | gggtccccc | 3300 |
| cggagcctgt | aacgaactcc | caacccccgg | cctgggtaaa | gggtcgcccg | agggtcattt | 3360 |
| tcagggtttt | tttatgcact | tagttatttt | tttaatat | ttaaatat | tttgaaaaga | 3420 |
| tgacgtctgg | ggaaatgcgg | cgcgccggcc | tgggacgcga | cctttgtgtc | tcgcaggcgc | 3480 |
| gcgcgccaac | ccgcgcggcc | gttcgcgggc | ccgcacccc | agttgggtgc | gacccccagt | 3540 |
| agaggggacc | acggagctcc | agggggggcc | agggctcccg | gggcgggcag | ccgcgcggcc | 3600 |
| gcgcgacgcc | gcccagctgt | gcccgtccc | gccccacccg | tgccagcctc | gcggggactt | 3660 |
| tccctttcag | tttcggggag | ggtgggtact | ggggacgcgc | gggggagggg | gcgcacacag | 3720 |
| ggaagctcct | gccgccccca | gccccgacce | ctcggcgcgc | tccagacctg | gcggccctgc | 3780 |
| caagcgcgat | gggggggtgcg | ggggcggtgcg | ggggggcggc | gcgaacctgg | ggcggcgggtc | 3840 |
| acggggccccg | tgccctccgta | gg | | | | 3862 |

<210> 62

<211> 2358

<212> DNA

<213> Homo Sapiens

<400> 62

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| ttaccaaggg | attggtggga | gggggaaata | ggaagtgtgt | gttcaatgtg | tataaattta | 60 |
| cagttatata | acatgagtga | gttccagaaa | tctgctgaac | aaccagtgta | ctatagttaa | 120 |
| caataagatt | ttgtgaactt | aaaaacttaa | agagagtaga | tctcatgtga | agcgttgtaa | 180 |
| ccataaaaa | aaaacaatgg | gacacaagga | aaatttggag | gtaatggata | tgtttattac | 240 |
| ctggcttgta | gtaatgataa | cgtgagtgtg | tgtatacact | tgtccaaacc | caccaaactg | 300 |
| tgaacattaa | ttacatgcag | ctttttggat | actagctgta | cctcaataaa | gctgaggggg | 360 |
| aaagtgtat | tactgtaaac | aaataatttg | gcctcatgac | gggtggagaa | actattttag | 420 |
| agagtgtact | aggggaagact | tctccaagga | gaagacttga | gaaggaaagt | aggaccctaa | 480 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| taaagtgaga | gatcaatata | ggcagacaac | taggatagat | catttcagtc | tgggagaggt | 540 |
| gggaatgggg | gaagaagtgc | agcaagaaga | agtccttgag | aaaaggttca | gcatggcatg | 600 |
| tttcaggatc | tgcaaaagg | ctggtatagg | tggacatgag | tgggggcagg | gtaagaaagg | 660 |
| aagttggaga | gcttaccaga | atggatcatt | tagggccttg | taggcaatgg | caatgagtta | 720 |
| gaaatgtatt | tgggtgtttat | cttccaaatt | atatttgaa | atataatga | actttattca | 780 |
| gctactggga | gacattggaa | agtcttaagc | aggggaatga | cttgaattga | cttagacttg | 840 |
| catttggtct | tgctggctag | ggtgtggaga | attgactata | gacatagcaa | gagtgagg | 900 |
| agacatctca | gaacatcctc | tgtctctcct | ggttatgcag | acttggacat | ttctcggata | 960 |
| aggcacgaac | attccatctt | agcagttcac | tgtctgcctt | ttcctcatct | atcttgcccta | 1020 |
| actcaaacct | aagactctgc | cacctttctg | ctgcataaac | ctaagctgct | ccctgctaata | 1080 |
| ggagagcaat | ccatacacccc | acagctgact | tacattttatt | ggagtccatt | taagggagga | 1140 |
| taccacccct | catattgtct | tatgcccaat | ttctgcctct | gaagaaagaa | taagtaaaaa | 1200 |
| ctaaaaggca | gaaatgaaat | ccactggcag | acagctctggt | gccacaccct | gggtctggta | 1260 |
| gttaaagatc | gacccctgac | ctaaccgggt | atgttatcta | tagattccag | acattgtatg | 1320 |
| gaaaagcact | gtgaaaattc | ctgtcctggt | ctgttctgat | ctgattacca | gtgcatgcag | 1380 |
| ccccagttta | tgtacctgct | gcttgctcaa | tcaatcacaa | ccctttcaag | cagacccct | 1440 |
| tagagctgtg | agcccttaaa | agggatagga | attgctcact | cagagagctc | agctcttgag | 1500 |
| acaggagtct | tgccgatgct | tctggccgaa | taaacctctt | ctttctttta | ttcggtatcc | 1560 |
| gaggaatttt | gtctgcagct | tgtcctgcta | catttcctgg | ttccctgact | gggaagtgag | 1620 |
| gtgattgggtg | gatggctcag | gcagctcctt | aggtgactta | agcctgccct | gtggaacatt | 1680 |
| ccgggtggggg | actctggcca | gcccagacaa | cgtggatcct | gagagcactc | ccaggtaggc | 1740 |
| ttttgccccg | gtgggacgcc | ttgccagagc | agtgtgtggc | aggccccctg | ggaggatcaa | 1800 |
| cacagtgggt | gaacactggg | aaggaaactgg | tacttggagt | ctggacatct | gaaacttgggt | 1860 |
| aagactagtc | tttggaactt | gcccactcca | tttgagtaga | agcgtggctt | gctcaccac | 1920 |
| ggtgtgcctt | tattggcact | ttggttttgg | ttttggtttt | gacttgggtt | gaattgcttg | 1980 |
| acaggactgg | tcttggaac | ttgcctactc | catttgagtg | gaagcatggc | ctgatcaccg | 2040 |
| atgggtgtgcc | tgtaccggca | ctttggtttc | tgtttttgat | ttgacttggg | ttgcttgata | 2100 |
| ctttgggtttt | gtctttgact | tggcttgaat | ttctggatac | tctgattttg | gttttgattt | 2160 |
| ttgtttgggtg | taaaactgtaa | aagtgtgtgt | gtgccctttt | tacoggttct | ttgttttgtg | 2220 |
| gtgtgcatgt | ggtgtgagcg | tgggtgtttt | cctcaaaaga | gcatgggtca | ggcacaataa | 2280 |
| agcccaccct | actaggaact | atgttgaaaa | atttcaaaaa | gggattttaag | ggagactatg | 2340 |
| acaccaggaa | aacttaga | | | | | 2358 |

<210> 63

<211> 2501

<212> DNA

<213> Homo Sapiens

<400> 63

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| gcaaaccaca | ttcttctctg | ttccctggaa | tccatcccag | tattgtgcta | tgtgtgtgtc | 120 |
| tagtaattct | ttacaaaaag | ctctgtttct | tgtgatgcta | tcagatcaca | ttgaagaata | 180 |
| tacaagccgt | actatgaagg | ctgttgtctc | atatagtcct | aacgtagtga | gaactgatgt | 240 |
| tcttacatgc | tgtctttttg | ggcactcaaa | gaaattcctg | tacagtotta | caaatcagtt | 300 |
| gtagcttaaa | ttgatttgtg | ttgtgacttg | tacacacagg | tcacattccc | ttgacagaaa | 360 |
| atatagttta | aaaccaaaatt | tgcagccctt | gttaagtga | tgcacaggac | tttattgtat | 420 |
| tcaggtcttt | tattgtaaga | ctcactcctg | tcttcatttt | atgttccact | gttggtcttc | 480 |
| ccatttgcct | ttctctagtt | ttgttttctg | tgtttctacg | gactgctctc | agcccagggtg | 540 |
| tgcaggaagc | acacacatgc | ctgcagagcc | ttcatggcct | ctgcattcag | ggcatgactt | 600 |
| caacgcacag | tggctgtact | gatttgttaa | aacaaaggaa | cagattactt | ctcctaattc | 660 |
| acaggggaagt | tccaggttgt | gcgggcagtg | agcagacctg | tgtctgtctg | cgcttgccct | 720 |
| ggtgaaaaao | cccaccgttc | aggctgcagg | gtgcgagacc | caggcacaaa | cattttgctg | 780 |
| gatgaggagg | aaagatgtaa | ggttgctccc | cttcagagac | agcaaagggc | aggtctgtag | 840 |
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| ggcctgaagg | tcctagtga | tctcgtgaag | agaggagggg | tctggctgta | acatggacct | 960 |
| agaggacatt | tttactgcag | gagaaggaa | agtggggatg | gggtggactt | gccaaaaggaa | 1020 |
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| aatgtgcttc | acacattggc | ttcaaagtac | ccatggctgg | ttgcaataaa | cattaaggag | 1260 |
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| gtgctgcagg | ggaggtgggg | acccgaataa | aggagcagtt | tccccgtcgg | tgccattatc | 1500 |
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| acaaaagaag | ggaaaggggg | aaggggaccc | tggcacagat | ttggctcgac | ctggacatag | 1620 |
| gctgggcctg | caagtccgcg | gggaccgggt | ccagaggggc | agtgtctggg | acgcccctct | 1680 |
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| gactaggtcc | cgcgggggcc | accgctgtcc | accgcctccg | gcgcccgctg | gccttgggtc | 1800 |
| cccgtctgtg | gttctcctcc | ctcctcctcg | cattctcctc | ctcctctgct | cctcccgatc | 1860 |
| ctcctccgc | cgcttggtcc | ctcctcctcc | cgccctgcct | ccccgcgcct | cggccccgcg | 1920 |
| gagctagaag | tccgggcagc | ccccgggcga | gcgcggccgc | agcagcctcc | gccccccgca | 1980 |
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| aaccgcgcac | cggcgccacc | gctcggcgcc | cgccgcccc | cccgctcttt | cctgtttcct | 2400 |
| tgagatcagc | tgccgcgcgc | accgggaccc | cgggaggaac | gggacgtttc | gttcttcggc | 2460 |
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<211> 3647

<212> DNA

<213> Homo Sapiens

<400> 64

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| ctcaaggctc | aaggttcctc | ttctgcaaaa | tggggaatga | taacacctgc | ctcctctgga | 120 |
| gtcttgggga | ctcagtgttc | tgaggaaagt | ggctgtaggt | cagagtggca | cagagtaggg | 180 |
| tcfaatgaag | catggcgctc | acagtagctt | tcctgactgg | actaaccttt | ccggacacaa | 240 |
| cagcagggca | ggggtggggc | ctggggagaa | aggacacctc | taacctgat | cctaaccatcc | 300 |
| cgatggcctc | taaggctgcc | tgcacactca | tccaggtgca | agccctccaa | ggtgtgggtg | 360 |
| gatgaaccag | tgactcctgg | agccaggtca | gcgcatactc | ttcccgccag | gctgtaagct | 420 |
| gcaggactga | gaggcaggtt | gaccaggtcc | tgggctggat | gatgggggtg | gagtaagggg | 480 |
| tcagttttga | tacatgccca | acttttctct | ctagccctaa | gacatcctgg | gcaaattgct | 540 |
| tacctcagtt | cccctgatcc | tcaccctaac | cctaacacca | gctcaagaga | aaatagggat | 600 |
| attgatggcc | atccagaagg | gtgctgtgtg | tccatacaca | gcaatatattc | tcgaatgttt | 660 |
| gtgacagogg | tccaaggaat | aagtttaattt | tacattatca | ctctggatac | ctgtacaaaa | 720 |
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| attacaggca | tgagccgcga | tactcggcca | acttttgtat | tactttctta | aagagagttt | 1440 |
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| caatctcagc | tcaactgcaag | ctctgcctcc | cagggttcacg | cattctcctg | cctcagcctc | 1800 |
| ctgagtagct | gggactacag | gcacccgcca | ccacacctgg | ctaatttttt | gtatttttag | 1860 |
| cagagacagg | gtttcaaccg | gttagccagg | atgggtctcg | tctcctgacc | tcgtgatctg | 1920 |
| cctgcctcgg | cctcccaaag | tgatggaatt | acaggtgtga | gccaccgcga | ctggccagat | 1980 |
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| tgcatacgca | cctgtccctc | tagaggtgcc | tgcttaagtg | tgctcagcac | atggaagcaa | 2100 |
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| aaaataagga | ggcccagtta | aatttgaatt | tcagataaac | aatgaataat | ttgttagtat | 2340 |
| aaatatgtcc | catgcaatat | cttgttgaaa | ttaaaaaaaa | aaaaaaaagt | cttccttcca | 2400 |
| tccccacccc | taccactagg | cctaaggaat | agggtcaggg | gctccaaata | gaatgtgggt | 2460 |
| gagaagtgga | attaagcagg | ctaataagaag | gcaaggggca | aagaagaaac | cttgaatgca | 2520 |
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| aagtcttttt | gggctgggtg | cagttgctcg | tggttgtaat | tccagcactt | tgggaggctg | 2640 |
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| ctgtcttttac | taaaaatata | aaaaattcag | ctgggtcatgg | tggcacatgc | ctgtaatccc | 2760 |
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| ttgggaccgg | agaaaecagg | ggagccccc | gggcagccgc | gcgccccttc | ccacggggcc | 3540 |
| ctttactgcg | ccgcgcgccc | ggccccacc | cctcgagca | ccccgcgcc | cgcgccctcc | 3600 |
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<211> 3050

<212> DNA

<213> Homo Sapiens

<400> 65

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| gggaatgcaa | aaatagcaag | tgcccagtt | ccacgaatcc | ccgcctcctg | ccctcccgcg | 180 |
| tcctgccggg | ttggatctct | aagaattggag | gttagcgcae | agcctcgcgc | gggccgctca | 240 |
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| ccgcggccca | ggggagctgg | gagggagggt | ggcctcgcca | ggccgacggc | gcgcgccggc | 360 |
| gcgcggcggt | gcctggagac | ggcctggcg | gcgctgtgtt | gctgtaaaaca | gccgcttccc | 420 |
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| gtccggctc | cccgcgcgcc | ccgaactatc | cgccgcgcgg | cctcactcctg | cctcgccctt | 540 |
| ctccagggtc | ccaccgcggg | ccccgacccc | cgggcccgaa | gagtggagaa | gggaagaccg | 600 |
| gggctgtgcg | gggacatgcg | tcttcgcgcc | ctggagggtg | ccagcgcgct | ggggctgagc | 660 |
| cccggcagcg | tgaccccgcc | tgtcctacgc | agcagggcag | gagattgggg | ggcgtggcac | 720 |
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| ctgcgaaatg | ctcacgagat | taggacacgc | gccaaaggcgg | gggcagggag | ctgcgagcgc | 1860 |
| tggggacgca | gcccggcgcc | cgcagaagcg | cccaggcccc | dgcgccaccc | ctctggcgcc | 1920 |
| accgtggttg | agcccgtagc | gtttacactc | attcataaaa | cgcttggtat | aaaagcagtg | 1980 |
| gctgcggcgc | ctcgtactcc | aaccgcacat | gcagcgagca | tctgagaagc | caagactgag | 2040 |
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<210> 66

<211> 3397

<212> DNA

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<400> 66

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<211> 5087

<212> DNA

<213> Homo Sapiens

<400> 67

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| gtatgatact | ggaattacac | ctcaataaag | catggtaact | gttttaagat | aggctggaaa | 120 |
| gagaaagcct | gaaaacaaca | ataatgatat | taataaatta | gtttacttct | ctagtctcat | 180 |
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| ctagaacaac | caactccaaa | tcttagtaac | ctaactgat | aaaggtttgt | ttctcaetca | 420 |
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| ctagacctt | gaggtcctac | aagaaaattt | gcaaatcatt | cactctgttt | tgaacaagg | 600 |
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| gggggcagtg | gaactcagcg | agggactgag | agcttcacag | catgcacgag | tttgatgcca | 1740 |
| gagaaaaagt | cgggagataa | aggagccgcg | tgctactaaa | ttgccgtcgc | agccgcagcc | 1800 |
| actcaagtgc | cggacttgtg | agtactctgc | gtctccagtc | ctcgacaga | agttggagaa | 1860 |
| ctctcttgga | gaactccccg | agttaggaga | cgagatctcc | taacaattac | tacttttct | 1920 |

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<212> DNA

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<400> 68

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| | | | | | | |
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| ctcaggttgg | gtgctgaact | ctgaccagga | accactgaga | aatcgaggca | gctgggagaa | 360 |
| gctgtagttc | caagcgctga | aaggaagatg | ggggacaata | aacctgggtc | gccaagcaaa | 420 |
| gggggagag | gcctggagaa | gtgggtctca | ggaccagagg | acagatcgac | ctcacacttc | 480 |
| atctccccag | actccacact | ccactgccat | caccacttac | gtgtctccct | cgctctctgc | 540 |
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| caggttgaaa | tcgccagcaa | gctcctcccc | gcccgcgcgc | tccctccgac | ctgcagggct | 2520 |
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| gggcttggac | ttggggagcg | atgattacct | ttgctcagct | tgatatttgg | cctggacgct | 2880 |
| aggagataag | cccatgtagt | atgcacacgt | ctgctacata | aacagggggac | agatagacga | 2940 |
| ctttcaacca | gcaagggtgc | agggaaaagc | aatgcacccc | aaacttctga | ccagaggtca | 3000 |
| tttgcctcca | aagatgctgc | catctgttta | ttcactgtct | ggacatttgg | aaatggctca | 3060 |
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<210> 70

<211> 3814

<212> DNA

<213> Homo Sapiens

<400> 70

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| gggaggggct | gccaaagtgc | ctgcctactg | gctgcttccc | gaatccctgc | cattccacgc | 120 |
| acaaacacat | ccacacactc | tctctgccta | gttcaacac | tgagccactc | gcacatgcga | 180 |
| gcacattcct | tccttccttc | tcactctctc | ggcccttgac | ttctacaagc | ccatggaaac | 240 |
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| cttttagcatt | ttgagaaagc | aacttacctt | tctggctagt | gtctgtatcc | tagcaggagg | 360 |
| atgaggattg | ctgttctcca | tgggggtatg | tgtgtgtctc | ctttttcttt | caggacttgt | 420 |
| aggattcttt | gtgccatttg | catataattt | ggcaggttca | cattttttta | gagccctatg | 480 |
| aagtgtcttt | tgcattgtgt | ttaaaaaggg | atttgaaaat | tgaaagtgtg | atztatggaa | 540 |
| ttaaatcat | ctgtaaaaaa | ttgctttgga | aagtaatgat | tgctggccat | aaagggaat | 600 |
| cttgcgatg | cacctaatgt | gtttttaacc | ctttatttgc | tgacaatcta | tagtcattaa | 660 |
| tgctaaactc | gattttggct | tcagctacat | ttgcatattg | tccaacaatg | gtctattttt | 720 |
| gtaagaatta | gataaaatgt | atacttgata | taaaatagtc | aaaaatgtaa | ctcttagtaa | 780 |
| cagtaagctt | ggcatttaga | tagaccatga | acacttcgtc | agatactctg | ttgggtgttt | 840 |
| gggatagcaa | ttaaaaacaa | gtattgatag | ttgtatcaga | gtctattagg | ctgcagcaaa | 900 |
| ggaagtattt | tcaaaagtat | aaactatcca | agattataga | cgcatgatat | acttcaccta | 960 |
| ttttttgtct | ccttaatatg | tatatatata | tatatatata | tatatataca | catatatgtg | 1020 |
| tgtgtgtatg | tgcgtgtgca | tgtttaactt | ttaattcagt | taaaaacttt | tttctatttg | 1080 |
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| ccgacaatgt | aacataattg | ccaaagcttt | ggttcgtgac | ctgagggtat | gtttggtatg | 1260 |
| aaaaggtcac | attttatatt | cagttttctg | aagttttggg | tgcataacca | acctgtggaa | 1320 |
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| attcctaatt | ggaccaagta | cagtactgtg | gtccaacata | aacacacaag | tcaggctgag | 1440 |
| agaatctcag | aagggtgtgg | aagggtctat | ctactttggg | agcattttgc | agagggaagaa | 1500 |
| actgaggctc | tggcagggtg | cattctcctg | atggcaaaat | gcagctcttc | ctatatgtat | 1560 |
| accctgaatc | tccgccccct | tccccctaga | tgcgccctgt | cagttccccc | agctgctaaa | 1620 |
| tatagctgtc | tgtggctggc | tgcgtatgca | accgcacacc | ccattctatc | tgccctatct | 1680 |
| cggttacagt | gtagtctctc | ccagggtcat | cctatgtaca | cactacgtat | ttctagccaa | 1740 |
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| ggcacataag | gcagcacatt | agagaaagcc | ggccccctga | tccgtctttc | gcgtttattt | 1860 |
| taagcccagt | cttccctggg | ccacctttag | cagatcctcg | tgcgcccccg | ccccctggcc | 1920 |

| | | | | | | |
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| ctttgggata | gctccaaatc | gagttgtgcc | tggagtgatg | tttaagccaa | tgtcagggca | 2040 |
| aggcaacagt | ccctggccgt | cctccagcac | ctttgtaatg | catatgagct | cgggagacca | 2100 |
| gtacttaaa | ttggaggccc | gggagcccag | gagctggcgg | agggcggttcg | tcctgggaact | 2160 |
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| ggggccagag | ctcgcggtgc | ggcgggacat | gcgctgcgtc | gcctctaacc | tcgggctgtg | 2280 |
| ctctttttcc | aggtggcccc | ccggtttctg | agccttctgc | cctgcgggga | cacggtctgc | 2340 |
| accctgccc | cggccacgga | ccatgaccat | gacccctccac | accaaagcat | ctgggatggc | 2400 |
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| ctaccccag | ggcgccgcct | acgagttcaa | cgccgcggcc | gccgccaacg | cgcaggtcta | 2580 |
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| agtcacttgg | gaaggtctcg | ctcttggcat | ttaaagtgg | gggtgtttgg | agtttagcaga | 3240 |
| gtcagcaga | gttttattta | tcctttta | gtttttgttt | aatgtgctcc | ccaaatttcc | 3300 |
| tttcatctag | actatttgat | tggaaatag | tcagctatga | tgatgacttt | ctgggaagcg | 3360 |
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| ctggcatgtg | acttctgaca | gccggaat | tgtaggtgtc | ccgcgagttt | aaaacaagcc | 3540 |
| atatggaagc | acaagtgtt | aaaaataatc | tcctgccagc | ccagtacaa | gcctgtccca | 3600 |
| ccgggggaga | atgccccgga | gtggcgtg | ggtcagccag | ggctctgcgc | tcgcagccac | 3660 |
| tgtggaagga | gcgcggccgg | tccaggacac | aggagaccac | tttgtgactt | caatggcgaa | 3720 |
| ggtgtgtgt | cctcatttta | atttttttcc | ctacaagaat | tgttctttct | ccctctcctc | 3780 |
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<210> 71

<211> 3223

<212> DNA

<213> Homo Sapiens

<400> 71

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| gaggcagcc | ggatcacgaa | gtcaggagtt | cgagaccagc | ctgaccaaca | tggtgaaacc | 120 |
| ccgtctctac | taaaatacaa | aaattagccg | ggcggtgggtg | tgacacactg | taatcccagc | 180 |
| tactcgggag | gctgaggcag | gagaaccact | tgaacctggg | aggcggagat | tgacgtgagc | 240 |
| caagatagtg | ctactgcact | cagcctgggc | aacaaaataa | gactccgtct | caaaacagaa | 300 |
| aaacaaaaaa | aacaaaaaac | aacaacaaca | acaaaatcca | ctagtctagc | cctacatgct | 360 |
| caccactgc | tagccagttt | ccaccctcta | cagcagaggt | acccaacctc | tgggccaggg | 420 |
| gcccgtaactg | gtccatagcc | tgtaggaac | caggctgcat | aacaggaggt | gagtggcagg | 480 |
| tgagtgaat | ttcatctgta | gttacagcca | ctcctcatca | ctcgcattac | caccagagct | 540 |
| ccactccctg | tcagatcagc | ggcggcatta | gattctcata | ggagctcgaa | ccctattcta | 600 |
| aactgttcat | gtgagggtatc | taggttgcaa | gctccctatg | agaatcta | gcctgatgat | 660 |
| ctgtcacgg | ctcccatcac | ccctagatgg | gaccatctag | ttgcaggaaa | acaagctcag | 720 |
| ggctcccact | gattctacac | gatggtgaat | tgtaggaatta | tttcattata | tatattacaa | 780 |
| tgtaataata | atagaaataa | agcacacaat | aaatgtaatg | tgcttgaatc | atcccgaaac | 840 |
| catccacccc | tgggtctgtga | aaaattgtc | ttccatgaaa | ccagtccttg | gtgccaaaaa | 900 |
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| | | | | | | |
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| cgtacacaca | cagagcagca | cacacacaca | cacacacatg | cctcagcaag | tcccagagag | 1800 |
| ggaggtgtcg | agggggaccc | gctggctgtt | cagacggact | cccagagcca | gtgagtgggt | 1860 |
| ggggctggaa | catgagttca | tctatttctc | gcccacatct | gggtataaaag | gaggcagtgg | 1920 |
| cccacagagg | agcacagctg | tgtttggctg | cagggccaag | agcgtgtca | agaagaccca | 1980 |
| cacgcccccc | tccagcagct | gaattcctgc | agctcagcag | ccgcccgcag | agcaggacga | 2040 |
| accgccaatc | gcaaggcacc | tctgagaact | tcaggtagga | gaaaagcaaa | ctccctccaa | 2100 |
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<211> 5034

<212> DNA

<213> Homo Sapiens

<400> 72.

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| agctaattt | ttgtattttt | agtagagaca | aggtttcact | atgttggcca | ggatggtctc | 120 |
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| aacagctcca | cagatgctga | cgctctgtct | aaggttatcc | caagaagtcc | tgtggcattt | 600 |
| gcaatgtgcc | tgctacatttt | tcttttttta | aaaaacatat | tcctgcagac | tttgttgaaa | 660 |
| gcagaaacaa | gcacaagcaa | gcaaaagcct | ttctagcaca | gcattgtta | cacacacttt | 720 |
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| | | | | | | |
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<223> unknown base

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<211> 3780

<212> DNA

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<400> 76

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| ggtcatgaga | aaagttatgt | ttatggtcag | taatgtgatg | ggccaaagag | ttcatgtttt | 1200 |
| taaaagttct | gtgttttaatt | tattacattt | attgcccctt | attctgtttc | ctgacaattc | 1260 |
| gaatcccagt | tggtctagaa | ggttgtgcct | cctaaatccc | tcttctctta | acaagtgtct | 1320 |
| gtttgaaatg | cttgttccce | actgccgtaa | agaaatagca | ctagaacata | aatttaattt | 1380 |
| actcagcaag | gccattttta | tactttctgc | agaaagggtg | cactcgccag | cagttttgcc | 1440 |
| atgagagtac | accaaacaaa | ggagacaggg | tcattttata | cctgacagat | ccaccctact | 1500 |
| gctgtgtcta | gtttccatca | gctggaatgg | gatctaacat | tctgtatttg | acccgattgg | 1560 |
| ctagcaactt | agaacttttt | aaaagaggca | aaggtagagg | aaaacaaaag | aaggagggaag | 1620 |
| taacttgttg | aatgctgaga | aaggtaaaaa | cacctttaaa | taagggaagag | gaacagggtta | 1680 |
| tgtcctaata | cttgcttgga | ccattataag | catgccaggg | caaatattta | ggctaagttg | 1740 |
| taggagctaa | gaacataaag | tacattgatt | tctttatcat | ggctagcaga | tatttaagaa | 1800 |
| tgtcccctgg | tgtgattcca | tcctgtgtgg | ctgttctctg | gagcagcatt | catttatctt | 1860 |
| cgtccgcctt | ctctcctacc | taagtgcgtg | ctgcctcccc | atggaagata | tgatggacgt | 1920 |
| ggacatgagc | tccttgaggc | cccagaacta | tcttttttgt | tgtgaactaa | aggctgacaa | 1980 |
| agattgtcac | tttaagggtg | ataatgatga | aaatgagcgc | cagttgtctt | taagaacggt | 2040 |
| cagtttaggg | gctgggtgcaa | aggatgaatt | gcacattgtt | gaagcagagg | caatgaatta | 2100 |

| | | | | | | |
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| cgaaggcagc | ccaattaaag | taacactggc | aactttgaaa | atgtctgtac | agccaacggt | 2160 |
| ttcccttggg | ggctttgaaa | caacaccacc | agtagtctta | acgttgaaat | gtgggttcagg | 2220 |
| gccagtgcac | attagtgga | agcacttagt | agctgtggag | gaagatgcag | agtcagaaga | 2280 |
| tgaagaggag | gaggatgtga | aactcttaag | tatatctgga | aagcgatctg | ccctcggagg | 2340 |
| tagtagcaag | cttcacaga | aaaaagtaaa | acttgctgct | gatgaagatg | atgatgatga | 2400 |
| tgaagaagat | gatgatgatg | aagatgatga | tgatgatttt | aatgatgagg | aagctgaaga | 2460 |
| aaaagtgcc | gtgaagcaat | ctatacaaga | tactccagcc | aaaaatgcac | aaaagtcaaa | 2520 |
| tcagaatgga | aaagactcaa | aaccatcaac | accaagatca | aaaggacaag | aatctttcaa | 2580 |
| aaaacaggaa | aaaaactcct | aaaacaccaa | aaggacctag | ttctgtaaaa | gacattaaag | 2640 |
| caaaaatgca | agcaagtata | gaaaaagggtg | gttctcttcc | caaagtggaa | gccaagttca | 2700 |
| tcaattacgt | gaagaattgc | ttccggatga | ctgaccaaga | ggctattcaa | gatctctggc | 2760 |
| agtggaggaa | gtctctttaa | gaaaatagtt | taaacaattt | gttaaaaaatt | ttccgtcata | 2820 |
| tttcatttcc | gtaacagttg | atatctggct | gtccttttta | taatgcagag | tgagaacttt | 2880 |
| ccctaccgtg | tttgataaat | gttgtccagg | ttctattgcc | aagaatgtgt | tgtccaaaat | 2940 |
| gcctgtttag | tttttaaaga | tggaaattcca | ccctttgctt | ggttttaagt | atgtatggaa | 3000 |
| tgttatgata | ggacacagta | gtagcgggtg | tcagacatgg | aattcgtggg | gagacaaaaa | 3060 |
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| aggtctttta | ataaatgttg | cttgtaagat | aagttactat | ttatttctaa | tcaaatgggg | 3180 |
| aggaaagtct | ttgaagagga | acctgttttt | tttcatgtc | ccatgcaggt | caagctcaca | 3240 |
| tggaactgtt | tgacacttgg | agcttgtccc | actcaacttc | caattgatta | tctttagact | 3300 |
| ctcttgctt | tctgaacatc | cttggtatgt | atttctactt | gccccttaca | cagattgcta | 3360 |
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| taaatgcaat | gtgaatgatc | taatgatgac | ttaaacagct | ctaagaaaag | attcaaccaa | 3480 |
| tatttatgaa | gcaactgcta | ggtggtagtt | accttcatat | gagttattaa | actcttaaaa | 3540 |
| tcacctgcc | atgtagaaga | tattggccca | tttttcagat | gacaggaatg | aggtcaagaa | 3600 |
| gagtcaatta | atttctcaag | attccactct | cagtggggct | gggatttgaa | ttctggtttc | 3660 |
| ttggcatcaa | agctggtgct | cttttcacag | acctgtgctc | ctgctggatt | tgctcagcat | 3720 |
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<210> 77

<211> 2515

<212> DNA

<213> Homo. Sapiens

<400> 77

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| gaagatacat | gaatgaccaa | taagccatta | aattaaaaat | tcagttagta | tacacatatg | 120 |
| ccctgaagta | gctaaacttt | aaaacactgc | cctatgtgtg | tgtacttttt | agctaaaaaa | 180 |
| gtgtttgaaa | acagtattat | tttgaaactc | aaaattccaa | atcctctctt | caaattaggt | 240 |
| ctagtgtca | ctggaagtaa | aagagaagtt | actttaactg | ctaaagagta | tccactaaga | 300 |
| ctacaaca | aacatcatgt | ttaatgctca | aactttagaa | gaatttatac | caaaagtcaa | 360 |
| gaataagata | ggatatctat | cttcattatt | aagcaacatt | atattagagg | acctaataca | 420 |
| tgcaacaagg | caataaataa | aagacaaaaa | tgtcataatc | agataactaca | aacatctaag | 480 |
| aaaattcagg | gggatttaca | gtcatatatt | aaacagtcca | gaaggagtcc | tatacatcat | 540 |
| caatgaatat | tgagaataaa | aaatagtttt | taaaaccctt | ccaatttata | agggcaacaa | 600 |
| aatgtacaag | gtactaaaat | aaatgtaatg | tgtatttggt | tataaataca | gcaacataat | 660 |
| gaaaagggtt | attggggaaa | aaattacaag | gagaaggggtc | aacaacgtga | agaggttccc | 720 |
| ctgccatctg | gacttctgga | aaaagacctg | ctggtctagg | cacagctgga | tgccaccatg | 780 |
| aaagtgggtc | caataaacac | tggcactgta | acaattgtgt | atggtgatac | aaaaagaggg | 840 |
| agccaatgaa | tacttggtcg | attatttaac | aattgcttct | ctgctgaaga | aatggccttg | 900 |
| ttggactaga | gcttaactgt | ggttcacata | ctaattgctg | tataacagct | agaagcctta | 960 |
| ctaagaaatt | tgctaaacca | ccaaaaagag | gaaatgaacc | ttctaggaca | tctggattgc | 1020 |
| cttttcttaa | aaatctagtc | ttggctgggt | gctgtgggtc | acgcctgtaa | tcccagcatt | |
| tggtgaggcc | gaagtgggag | gatcacgagg | tcaagagatc | gagaccatcc | tggtcaacat | |
| ggtgaaaccc | tgtctctact | gaaaatacaa | aaattagctg | ggcgagggtg | catgtgctt | |
| tagtcccagc | tgctggggag | gctgaggaag | gagaatcact | tgaacccggg | aggcggt | |
| tgcaagtgcg | tgagatcacg | ccattgcact | ccagcctggc | aacagagcaa | gact | |
| aaáaaaaaaa | aaaaaaaatc | tagtctgtat | ggcagcacia | catcaggtaa | ac | |
| tageccagatc | actgggttaac | cttaaccctt | atgtgcttga | gttcccttat | ct | |
| gagatgatata | agcaatagct | gattttggac | tggttaaagg | attaagtggg | caca | |
| gtgcttagaa | ttgtgcttgg | caagtágtag | gctgcaatat | tgtgatataa | taaata | |
| tatttgatct | tcacccaagt | cctggcacag | atctccagaa | acccttgtaa | tttcctg | |

| | | | | | | |
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| gacaggggtg | atagaaacat | cttttattag | aatacttggg | cttggttcct | gacacaagag | 1680 |
| cttctaagac | ctttggaatc | tccaagtgat | aagagtgtat | gacagtgagc | taactggtgg | 1740 |
| ctgggatcct | ttagacaact | tcaggatggg | ggctatcccc | tgaaagacta | aggcatgatt | 1800 |
| agaggtctgg | gatttgcagc | cccacgcctc | gacctccaga | gagggtaaaa | gggctggcga | 1860 |
| ttgattaacc | accaattgcc | agtgatttag | ccaatcatgc | ctaagtgatg | gcacctccat | 1920 |
| taaaaaataa | accacaggtt | tggagagctt | tcggtttggg | taaccccaac | cacataccaa | 1980 |
| gaaggcgatg | cacctcaaac | tgcatagaag | caaaagggtc | tgtgctcacc | tgggaccctt | 2040 |
| ctggacgttg | ccctgtgtac | ctcttcgact | gocgtttcat | ctgtatcctt | tataataaag | 2100 |
| cagtaaacat | aagtaaagtt | tctgagttct | gtgagccatt | ataagaaacg | atcgaacctg | 2160 |
| ggattttcct | ttcgggaagcc | gctctctctc | acaagggaga | gagctgttct | cctttttcct | 2220 |
| ttgctgttta | aacctccgct | cctaaaccca | ctcttcgtgt | gtatcgtgtc | cttaaccttg | 2280 |
| ttggtgagag | acgacgaacc | cggggtattg | acccagagca | acaatgccac | ttcatattgg | 2340 |
| ggacttcgtc | tgggattcca | agggtcattc | attgcaaagg | tgagtaaagg | ggcggacctc | 2400 |
| aactctgtcc | tttgatttgc | aggctcttgg | cctccatttt | agaatcaaac | caaaccâaat | 2460 |
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<210> 78

<211> 3107

<212> DNA

<213> Homo Sapiens

<400> 78

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| ggtcaggaga | tegagaccat | cctggcgaac | acggtgaaac | ccgctctcta | ctaaaaatac | 120 |
| aaaaaattag | ccgggcatgg | tggcgggcgc | ctatagtccc | agctactcgg | gaggctgagg | 180 |
| caggagaatg | gcgtgagccc | aggaggcaga | gcttgccgtg | agctgagatg | atcggggcac | 240 |
| tgtactccag | cctgggcaac | agagtggagg | tccgtctcaa | aaaaaaaaaa | aattactaca | 300 |
| tgatactaag | taatgcggaa | ggtgactcaa | agggggaaag | gaacacagca | gtgtaaagga | 360 |
| aggaggttgt | agatggatct | agaatttccc | cctcatttcc | atcagggtga | agcctgagaa | 420 |
| aaactgcaatc | tttgtgcagg | ctgggtttgc | tttgtacaca | ctgggtccct | agtgttcatc | 480 |
| tccaataatg | ctgacaactc | tgaaaaccat | ctgtagacat | tctgcaggct | ccatctcagg | 540 |
| aacaatggct | attttttcgg | gtagtgtgaag | caaaattaa | tccaatgata | agcaaatata | 600 |
| accattatca | aaatcttcca | tttatgtttg | ttaaagcaac | ctaagtatga | tctgagaagg | 660 |
| actctgtatt | ctatatattga | gtccttgttg | atgaactgta | acctagctta | ataggcagac | 720 |
| aagattgaaa | acctaattta | ggagtatgtg | cctttaacaa | tagctgagtc | ttggccaatc | 780 |
| ccagtggcca | tacttcaacc | attcatacac | tgctgagtgt | tcaaactgtg | ttcaaagaag | 840 |
| gcaaaagcca | acctgtaacc | aatccagttg | tttctctgcc | ttacctccaa | tttctgtatg | 900 |
| tcaacttccc | ttttttgtct | ataaatatgt | tctgaccatg | aggcatccct | ggagtctctg | 960 |
| aatccgctgt | gatttctgaa | gctgccccat | tcgcaaatca | ttcattactc | aattaaactg | 1020 |
| tttaaatatt | aattctgtcg | aagttttctt | ttaaagggtt | tagaaaaaat | taaggcaaaa | 1080 |
| tgaatgaaa | atccaataac | cctggaagca | gaaaaggctg | ggggctccaa | taagtgtaaa | 1140 |
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| tgggtccttg | gcagtcacag | aagccaccgc | gctggcgggg | aggaggggga | ccgatgcggt | 1740 |
| ccatgtcccc | ggcagcccca | ccttctctgc | ctgcgaaggg | cccttgtccg | gcgggaggag | 1800 |
| agaggcgcgc | cccacccggg | ctcctctaca | cctgccgcgc | cctgggccga | ttccgcgggc | 1860 |
| ctcgcgccgc | gcttcagccg | attcccgcgc | agctccgggc | tcatgggcgc | ggtcagcagg | 1920 |
| gcggggccagg | gcgggcgggg | gcgacactgg | gaggaagtgc | gggcccgcct | cccgggcgcg | 1980 |
| ttaagggaagt | tgcacaaaat | gaggaagagc | gcggggccgc | gcggctgagg | ccaccccggc | 2040 |
| ggcggctgga | gagcgaaggag | gagcgggttg | ccccgcctg | cgccgcctct | cgctcacct | 2100 |
| ggcgcaggta | ggtgtggccg | cgtcccttac | ccggccggga | ctttctggta | aggagaggag | 2160 |
| gttacgggga | acgacgcgct | gctttcatgc | cctttcttgt | tctaccttca | tcggccgagg | 2220 |
| taaaagtgtc | gaaaccatgt | gaataaaata | caggtgggtt | ccgccagctt | cgctcctgaa | 2280 |
| cctacccgcg | ctcgggatcc | agaagctgcg | ccgggagaga | ggggctcagg | cctgggcgga | 2340 |
| ggggacggag | gtcagaccgt | gcggaaagtg | acccgggcac | cccagggcgc | ccaggcccc | 2400 |

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| agggagcgcg | gaaagtgcgg | tcgcggcccg | gccctcggga | gacgcgggat | tgggatcagg | 2460 |
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| ccactggaaa | atgccgcagt | gtttatcaaa | gttactcaaa | gtagaaatgt | ccagacgtct | 2580 |
| tatgagctta | gacaaatctt | ttactacaaa | aagaaacagc | agttgcattc | aaacaacaac | 2640 |
| ccttctgaac | cactactaaa | atttagcata | attactottg | tggatacatt | ttcattgtca | 2700 |
| agtaatttac | ttagccaatg | aacttggaga | gcaagaaagt | tttatgtagt | aaaatgtaaa | 2760 |
| tttgagttaa | gagttaagg | tgtttctttt | tgtctgtttg | tctgtttttg | gcaatgtggc | 2820 |
| tccaaaacct | taagcccacc | taaaaactat | ataaatgcaa | tccattcttt | tgttggaatg | 2880 |
| ttcaaggact | agaaagacaa | ttggagaagt | gagagtttga | atcttttttt | acgttggaaa | 2940 |
| cagtgttgca | aaatattttt | tgagttttgc | ctgacttagc | aaagattcag | tcgaactcaa | 3000 |
| gtagagttca | aaagcattgca | gcgtgtagta | aaaaaaaaaa | agagttgaag | atgttgtgac | 3060 |
| atatctgatt | cttgggtatta | aaaataaaaa | aaggaaccat | ttaatcc | | 3107 |

<210> 79

<211> 3283

<212> DNA

<213> Homo Sapiens

<400> 79

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| aaagggggat | ctccttttgg | catcccgctc | agagcagcca | ccataacttc | tgagcgttta | 120 |
| ttgctagctg | atatatatca | gaapaaataca | aattccacaa | aagcagggac | tgggtctgctt | 180 |
| ctctccctgc | agggcccgag | ttctggcaca | tagttgggtg | agaaagtgtg | cagcctcagg | 240 |
| tcctatccaa | gcccccgagg | catcacactc | gggacttgtt | ctgcataatt | ttacttttgc | 300 |
| ctcccactgg | tactagttct | tccgtggaac | agcctgagtc | ccttcagata | cttaatgttt | 360 |
| tttctcaagt | gctgccatga | agccagatct | ccaccgtctt | ggggcattcc | tttttaggga | 420 |
| tgggaagtat | atgtegctcc | ttttatgtga | tttacattct | atcttggata | atttggccat | 480 |
| caccgtagtt | cattcagatc | tgtttggatc | ctgcccatct | cagcttcagt | ccatttcatt | 540 |
| cttttaaatc | tgatcgacag | ttacctccaa | cagcttctac | acaaatcact | cacaaaaatg | 600 |
| gccttaatcc | tgaagtttat | ttacggagag | cacacttgct | aggtgtgtgg | cagatatata | 660 |
| ggaagcacaa | gatgaggcag | cagatctaga | ggcaaatgac | ttccttctcc | ctgcctagt | 720 |
| gtgactgcc | gcatcacgcc | ctcccgggag | aggtgagaaa | cccctccacg | caagcactgg | 780 |
| aaccttcaca | gtcaagagt | gcaacagctc | cggttactgg | acttgggcct | gttgaattct | 840 |
| aatactctgt | gactccacat | ctgggctgaa | tttttgcgtg | gtatgatgga | atttacatgc | 900 |
| ttcctcccta | gccccactct | gtctgtatag | ttggaatatt | tggttgcctc | ctctggagg | 960 |
| atctagtacg | tttagagttc | agacgctgga | actgtcaaat | ttcagaggaa | agagctccag | 1020 |
| ctgcaaagca | agagaaatgg | gctggaattc | tagcttcacc | ccttaatgaa | tgcttctgat | 1080 |
| tttttttttt | tttttttttt | ttgagaactg | gtctcactct | atcgcccagg | ctggattgca | 1140 |
| gtggccacga | tctcagctca | ctgcaacctc | cgctcccagg | actcaagcga | ttctcgtgcc | 1200 |
| gagcctcct | gagtagctgg | gattacaggc | gtgcgctacc | acgcccggct | aattttttgta | 1260 |
| tttttagtag | agacagtttt | tggccatgtt | ggtcaggctg | gtcttgaact | catgacctca | 1320 |
| agtgatctac | cttcctcggc | ctccgaaagt | gctgggatta | caggcccgag | ccaccgcgcc | 1380 |
| cagcgccttc | tgatcattaa | aaaaaaaaat | tttttttggc | ggggggaacg | aagtgtccct | 1440 |
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| tttgaacaag | ttacctaat | ctctgaggac | aagctcggag | aatgggagag | acagttatct | 1860 |
| atttgcagg | ttgttgggag | gaataagtga | catcatgagt | gtgtgccagg | tgtctgatta | 1920 |
| cagaaggtgt | tcaattaatc | tgcaatcatt | aattaacct | tcagtgcgtg | gtattatttg | 1980 |
| ccatccatcc | tccgagtgtt | gccaagttat | gggtgcgttc | tgccagcgct | ctagcagtgg | 2040 |
| taaggcttct | ggctgcagc | ggcgaaacct | tccctctcag | tatttctcct | cttgcctgga | 2100 |
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| cctactcccg | gcccctcggc | ttccgggaacc | cgcccagacc | cgaagcgccct | cttccgaggc | 2460 |
| gcgggatttc | ctccccggct | gcggctggga | cgggggcggc | catcgccgct | taccggggcg | 2520 |
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| | | | | | | |
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| tgtgaagatc | taaataaata | acgtggaaaa | tgcaaagtat | aatgtactaa | gtgaaagaac | 3060 |
| tcgagcacac | tgggggtcca | cgaagctgca | gctgcagccc | aggggtggcac | atcggcgaga | 3120 |
| cgggtggtgcg | cgctccaat | ctcggagggc | gccccaaatg | gaaaatgttt | ttaggccagg | 3180 |
| gagtgcagcat | aaacattagt | gtttttgtgg | tcatgtagca | aattagggca | gaggagagtt | 3240 |
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<210> 80

<211> 3197

<212> DNA

<213> Homo Sapiens

<400> 80

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| actttgggag | gcccaggcgg | gtggattact | tgaggtcagg | agttcaagac | cagcctggcg | 120 |
| aacatggtga | aaccccatct | gtactaaaaa | tacaaaaatt | agccagtgtc | gcggcacttg | 180 |
| cctgtagtcc | cagctactca | ggaggctgag | gcagaagaat | cacttgaacc | tgggaggtag | 240 |
| aggttggagt | gagcctagat | caggccaactg | cactccagcc | tgggogacag | agggagactc | 300 |
| catctcaaaa | taaataaata | aataaataaa | taaaacatag | aagatgtaca | gtaaaaacac | 360 |
| ggtaattgtt | tttgtttgtt | tgttttgaga | cagggtcttg | ttctgtcatg | cggactggag | 420 |
| tgcagtggca | ccatcaggct | cactgcagcc | tcgacctoct | tggctcaagt | gctcctccca | 480 |
| cctcagcctc | ctgagtatct | gggactacag | gtccacgcca | ccatgcctgg | ctaatttgtt | 540 |
| ctgaatttta | gtagagatgg | ggtctcactg | tgttgcccag | gcttggtcca | gccttctggc | 600 |
| ttcaagtaat | cctcccacat | cagcctccca | aagtgtcaag | attacagatg | tcagccactg | 660 |
| caccagccca | gtaatatata | tttatgggac | caccttcata | tttgctgtcc | cttgctgact | 720 |
| tacacatctt | tatgcaatgc | atgactgtta | ccatcattat | catctctatt | ttcoagatgg | 780 |
| ggaaactgag | gcacaaagaa | tctaacttgc | acaagttcat | ctgcttagtg | atggaacaaa | 840 |
| gatgtgaatt | caggcagctc | ggcttcaaa | tccacacgcc | taacaaccac | accagattac | 900 |
| tagattgctt | ttttcttttt | tctttttttt | tttttgagat | ggagtctcac | tctgtcacc | 960 |
| aggctggagt | acagtgggtga | gatctcgggt | cactgcaacc | tctgccttct | gggttcaagc | 1020 |
| aattctcctg | cctcagcctc | cccagcagct | gcgattacag | gcgcccgcga | ccacaccag | 1080 |
| ctaatttttg | tatttttagt | agagatgggg | tttcaccatg | ttggccaggc | tgggtctcaa | 1140 |
| ctccttgacct | ctggtgatcc | tcccacctcg | gtctcccaa | gtgctgggat | tacaggcgtg | 1200 |
| ggccaaccag | cccagcccag | actgctttat | tttgtatttt | gtattttatc | atttacttat | 1260 |
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| ggccacaggc | atgcaccacc | atgccagct | aatttttaaa | tatttttttg | tagaagtagg | 1440 |
| gtctcactat | gttgcccaga | ctggtctcaa | actcctagcc | tcaagggacc | cttctgcctt | 1500 |
| ggcctcccaa | agtgttgaga | ttacaggcat | gagccatgca | cccagcccct | ttttaaaatt | 1560 |
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| ctcactgcag | cctcaactcc | tgggtctcaag | caccagactc | cttttatcac | attctatctc | 1680 |
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| gcttaagcac | cagggccggc | gagtgccttg | ccgtggcaag | gctccagcgt | cgcgctctcg | 1860 |
| aattcatttg | ctttccttaa | cgagagaagg | ttccagatga | gggctgaacc | ctcttcgccc | 1920 |
| cgcccaaggc | ccctgaacgc | tgggggagga | gtgcatgggg | aggggcccgc | ctcaaaccgg | 1980 |
| tcattgccat | taatagagac | ctcaaacacc | gcctgtctaa | aatacccgac | tggaggagca | 2040 |
| taaaagcgca | gccgagccca | gcgccccgca | cttttctgag | cagacgtcca | gagcagagtc | 2100 |
| agccagcatg | accgagcgcc | gcgtcccttt | ctcgtccttg | cggggcccca | gctgggacc | 2160 |
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| gcccccgccc | gccatcgaga | gccccgcagt | ggccgcgccc | gcctacagcc | gcgcgctcag | 2340 |
| ccggcaactc | agcagcgggg | tctcggagat | ccggcacact | gcggaccgct | ggcgcggtgc | 2400 |
| cctggatgtc | aaccacttcg | ccccggacga | gctgacggtc | aagaccaagg | atggcggtgt | 2460 |
| ggagatcacc | ggtgagcccc | cctgctcctg | caggggagag | gaggaggcta | gcagggcggg | 2520 |
| cagggccggg | ggcgtgcggt | tgaacggggg | gtcccggggg | cctggggagt | taaacgttgg | 2580 |

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| gcttctaagg | gcgctttctg | ctctgtaatc | ccagcgcttt | gggaggccga | gacgggagga | 2700 |
| tcgcttgagg | ccaggagttc | aagactagcc | tgggcaacat | agcgagacgc | gccccccgc | 2760 |
| cccagccccg | cgccattaca | aaaaaaaaagc | aaacaaaaat | tttttttaaag | atcatcgatg | 2820 |
| aagagagaaa | atgcgctttt | ctacagagtc | cccttcccaac | ccacagcccc | atccccagat | 2880 |
| aagcggggag | ttccctggcg | cggtgccagt | ttctagccgc | tgagtgggcg | tgtgcgcggc | 2940 |
| tccaagtgcg | cctgcgtact | gctcactccc | cagctccgcg | ccctgctccg | ttcctcccaa | 3000 |
| aactctgaat | cgaagaactt | tccggaagtt | tctgagagcc | cagaccggcg | ggcacgcccc | 3060 |
| catccccaac | cccctctggt | aatccctacc | agcctgcagt | cctggctgct | tccaagcagg | 3120 |
| aggtggggcc | tctggcctag | cggggccgaa | aggcagtcce | ctcccccgca | gtctgatttc | 3180 |
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<210> 81

<211> 3155

<212> DNA

<213> Homo Sapiens

<400> 81

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| ctgtcatcaa | ctacatgtac | tcatcaaacc | atgccagttc | tacctcctta | ataactgtag | 120 |
| tttaacacct | gaataactga | acaaaaactt | acaatttaac | tctcttaaca | cttatctacc | 180 |
| tcaattttat | ttttataatt | tatacataat | ctataattat | ttttatataa | ttggcacagt | 240 |
| gataattcca | gataaaactc | actgaatttc | tatttccatc | cttgccaatg | atacacacac | 300 |
| acaatgtaat | gctgagaggg | ttgggaagga | agaatgggag | aaaggcagaa | gttgacagtt | 360 |
| aaaaaaaaaa | agtttccaga | tggttttctt | agtgtcatct | ctgcaacctc | atcaaataag | 420 |
| ggtccaaaat | ttatgttaca | acatttggtt | gatgccttat | ttaaattgct | ttactggaca | 480 |
| ttttccatct | gttaagctct | ctgaaagaaa | caaaattgcc | ttgtcatagc | tagacctcat | 540 |
| gatoctatac | acttacaacg | ggcagacttt | gcagggggcc | acacctttca | aggtgggttg | 600 |
| ggaaaatgac | acagaaaagt | ttacatcag | ctgaaaagaa | aaatgcataa | ctcatttttg | 660 |
| taatttcagt | tttaattctt | aataggataa | aggaacatg | cacattataa | atcaatgctc | 720 |
| tgtgttaaca | aaataatcaag | taagcagagt | tgcaagtatt | ggctaaaatg | aattttggtat | 780 |
| atttttagct | accaaatttc | tcgaggcaag | gcagacatac | atctggacct | gaatatctgc | 840 |
| attattaggg | aatttttggt | tgtttggttt | atattgtttt | gttattttta | aaagtaggtg | 900 |
| ccaaattagg | tcacctgctg | tctgggcaat | gttatttttt | gccataacca | caaattgaag | 960 |
| aaaattgact | gctctttttc | cttagtcaac | atgctgtgct | tccagcccca | aacatctttg | 1020 |
| agaagtgtt | tagattcatg | agcaatgcct | ctgtccccaa | caggctaaga | cattaggcag | 1080 |
| gtccctgcac | ctctggagtc | ctcagttccc | tgcaaagtga | ggaagctaga | ctaagtaatc | 1140 |
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| agcacgcga | taggcctagc | accatctcac | acagagacaa | agggcaaccc | tctgcttcca | 1320 |
| ggaatgac | acaacctgtt | tctgaagtga | ttcacatcat | ctttactttt | gaacaaccca | 1380 |
| atgctcagaa | aacaatctaa | gaatcttgc | tgacttttag | gatgtaagat | acggtttctt | 1440 |
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| agggcgccgc | ctcggaagcc | gccccgcctc | tcaccttgcc | agcgccgcgc | tcgggcccgc | 1860 |
| aaggtgcgtg | cggcgctcgg | tgattggcgg | cgccccggag | ctgccccggt | gccaattggct | 1920 |
| gcccggcccc | ctttgttccc | gggtccgggc | cgcaggcccc | ctgcggcgga | ctgggcccgc | 1980 |
| gaagttcgac | ggcgccgggc | gagtggctgt | tgagcggcgc | cgcgggagtt | ccgcaggttt | 2040 |
| cccggtgtcg | cagcggagcc | ggaggccagc | tgaaccgggc | cgtgggatcc | cggataggag | 2100 |
| gaggagggga | cccataggac | gcgttaacat | ggacctggaa | aacaaagtga | agaaggtagg | 2160 |
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| atTTTTTTTT | cggtcattca | ttacttgtct | accgaccgag | gcagtgcctc | cctcttaggg | 2760 |
| aattatctgt | caaagagcgc | attctccttg | tttggcaggt | agtcccaaag | ggcggttgtc | 2820 |
| accagcgtct | cagcgcaggg | agacattttc | agcttggctg | ctgcctcgca | ggcactggaa | 2880 |
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| ctgtgcgaaa | gttctcctcg | ttccagggga | tttgcctcatg | ttttactttg | tggtaaattt | 3060 |
| aagctagctg | tcccttatca | aatagagaag | ttttgcagag | agaggaaggg | aaaaatacag | 3120 |
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<211> 14491

<212> DNA

<213> Homo Sapiens

<400> 82

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| ggaagtcact | accaatttct | cactccacaa | agtatatgaa | ttcataatat | gccaacagtg | 180 |
| gccaataatgt | cctacttcta | aggctatggt | acacccttag | aaagatttat | acataagtcg | 240 |
| gggagagaca | gggttaggct | tcttttgtat | ttcgatcatc | gtagaatgcc | caccttcaca | 300 |
| ccttgaataa | attccaacag | tacgtgtgct | tggggaccca | gagaatttta | cagtctccat | 360 |
| atagcacccc | cctccacttc | ttccctcaac | ctgctcccac | caatgcaactg | ttaggaggat | 420 |
| gaagggttaag | gaggacacac | aactttctct | tataaagggt | ggaagcttac | cctaagaatg | 480 |
| gaaataaact | tgacagaccag | ttctcagaga | gatcaaactt | ttgaaaaagt | tcaaaatctg | 540 |
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| gagtggctga | ggccccaccgc | ctatttttgt | tcagcccaact | gctaagaatg | gtttttgcat | 660 |
| ttttattttt | tatttttttg | agacggagtt | ttgctctggt | gcccgaggctg | gagtgcagtg | 720 |
| gggagatctc | agttcactgc | aacctccgcc | cctcgggttc | aaacgattct | cctgcctcag | 780 |
| cctccagagc | agttgggatt | acaggcgagc | gcaaccatgc | ctggataatt | tttgtatttt | 840 |
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| ccgcgcctc | agcctcccaa | agtgttgga | ttacaggcat | gactcactgc | atccggcctg | 960 |
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| tgaaatttag | gcagccaggc | tttcaagttt | ctgcttttag | ttaacttcta | ctctttgtgc | 3540 |
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| gcaagaccgg | ggggcagatc | caggtgcggg | ggccagccct | gcgcgtggct | gggatgagg | 2160 |
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| ccctctcctc | taggtgattc | tcgggcccag | gttctcagg | aaaaggtaat | ggcttcggcg | 2280 |
| ggctgggggtg | gagctccttc | ctcttctccg | gggacccctt | gtcccgctcc | tcccctcccc | 2340 |
| ttccctcccc | tcccctcccc | tccccttenc | cttnccttac | cccttncctt | ttccctaaga | 2400 |
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<211> 2359

<212> DNA

<213> Homo Sapiens

<400> 95

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| cctctgtcct | gtgggggtctg | ctgtgtcatg | tgggggtggg | gggaagcaga | ctggccaggg | 120 |
| cttgacacca | ggagccatgg | ctctgtctta | cccaccgcac | caactgtgac | ctgccttgga | 180 |
| gcctagcctc | gcagaggccc | aaggagaggg | gtgggaaagt | gtccttcaga | gcagagcggt | 240 |
| aggagtcattg | gctggggctg | gtggaggcca | ggggccacat | ggggctggcc | ccagaaccga | 300 |
| ggggccttgc | ggatttgcca | tacctttggc | aaatggcggt | gtgggcgctt | cgctgggtgg | 360 |
| gggtggtaca | aggcttcttc | ctaccccact | tctgtagctg | gcacctgtgg | ggctaccac | 420 |
| cctccgcat | ccttcagctc | acttgtctca | ccgcggtgc | atcacactcc | acaaggcaag | 480 |
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| ccactcagtc | tggggaggca | ggaggaggc | tggacatgaa | tgtgaacatg | acaggcctgt | 600 |
| gagcagggca | ggtagatata | gcccggctgg | gcacaaagct | catcccctga | gcatgagccg | 660 |
| aggccgaggg | tgggtgggag | cacacagagg | atgcctcccc | agctgccagg | gcatcagcct | 720 |
| cattaccaag | caccccaaaag | gggaactgtt | tggggttggg | tgggtcagcc | tgcagcaggg | 780 |
| actgagacag | ccactgtggc | atcaaagacc | agcagtgcag | taccacgccc | cagaggctgg | 840 |
| aacccatttt | gtgcactgtt | ggcctggaag | gtaggaacca | cctcagccca | gctgccttgt | 900 |
| gcatcatcg | ggtcagtcac | agagctacag | acagatctgg | gcagctggaa | aacaggccca | 960 |
| agaaggggg | gtgtgggctg | ttacctgcag | ttactgtctg | gccttagagc | tgtgtcactt | 1020 |
| gtgtaaaagaa | gtcagtgcc | aggccgagcg | caagaatttg | agaccagcct | ggccaacatg | 1080 |
| tgggaggcgc | aggcaggtgg | atcacgaggt | agaccagcct | ggccaacatg | ggccaacatg | 1140 |
| gtgaaaaacc | gtctactaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaattagc | taggcattgt | 1200 |
| ggcaggcacc | tgtaatccca | gctactccag | aggccgaggc | aggagaattg | cttaaaccgc | 1260 |
| ggaagcggag | gttatagtga | gccaaagatca | tgccactgca | ctccagcctg | ggcgacagag | 1320 |
| caagacccca | tcttgggaaa | aaaaaaaaaa | aaattagcgc | caatggctgc | ccattactga | 1380 |
| ctgttgaggt | agttgggtgac | aaactgattc | aaaagagagg | acttgctagg | ctgggtgcgg | 1440 |
| tggctcacgc | ctgtaatccc | agcacttttg | gaggtgacg | caggaggatc | gcttgagctt | 1500 |
| aggagttcga | gaccagcctg | ggcaacattg | caaaaacctg | tctccactaa | aaatacaaaa | 1560 |
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| ctcaaaaaac | aaagaaacaa | acaacaacaa | caacaacaaa | aacagaactt | gcctcctgtc | 1740 |
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| tctgtctgca | cccctgcccc | acaggcttgg | tagggccaag | gccctcagcc | gccctgcggg | 1860 |
| ggcccctggt | gtagggcggg | gtgggtggca | gcccgttcc | ccctcatccc | agaccctccg | 1920 |
| gcatccccag | cttttcccac | caagcaggat | cttgagacca | gagctcccag | caggggcccct | 1980 |
| ggagggaactg | gcccattcga | gtggagggtc | gcggcaggaa | caagtgcggg | ggcctcaaaag | 2040 |
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| gtgtcttgg | aggggtcccg | ggatggtgac | gtctgaagcc | ccgtgcagag | gtggggagat | 2280 |
| ccctgagggc | tgggtcccga | ggctgggggg | gcctaggtcc | catgtggggg | ctgcgccttc | 2340 |
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<210> 96

<211> 2474

<212> DNA

<213> Homo Sapiens

<400> 96

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| tagagatggg | gtttggccaa | cacgttggcc | aggccggtct | tgaactcctg | acctagagtg | 120 |
| atctgcctgc | cttggcatcc | caaagtgtct | ggattacagg | tgtgagccac | cacaccacgc | 180 |
| cacttctgtc | atattctgat | ggacacacag | aacagcccta | actcaatgtg | ggaagacacc | 240 |
| atacaggggc | atgaatccta | ggtggtgagg | atcaatgggg | gctgtctttg | aggctgtcta | 300 |
| ccacagggc | tttccatcct | tcctgcccgt | tttgccttgc | tttccctatg | tgtaggcttc | 360 |
| attctcaaac | aggccctccc | tagagagtga | caaagggtgat | catcaatgtg | ttcagaccca | 420 |
| catgctctgt | gcttagtaac | cccagtgcaa | etttttttgt | ttcccaaaag | ttctggcaaa | 480 |
| agtcccaagc | tagcacttta | attggcctaa | attgtgtata | tgccttatctc | tgaaccaatc | 540 |
| actgtggatt | agagatgtca | tgcctctgatt | gaccagacct | aggccacatc | tctagcccta | 600 |

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| ctaaaggaaa | aatcaaagtg | tcattaccga | accaggacag | atgctgggca | gcacatgtgc | 720 |
| accccgctctt | cttctcatgt | tccagctgca | catcttagtg | ccccttggtt | tagcactttt | 780 |
| ctcattaaat | catttgcttt | cttgccctcac | ttcctgtggt | tggtagaatg | ctaagatggc | 840 |
| cccaagatct | ctacccctgg | tgtttgcaca | cctcccagtt | attctgtcaa | acatgaatgt | 900 |
| agatgcttct | gtgaaagaat | tttgacatg | taattttaagt | cccaaattgt | ttgaccttaa | 960 |
| aataaggaga | atggcagggc | caggcatggt | ggctcatacc | tgtaatccca | gcactttggg | 1020 |
| aggccaaggc | gggcagatca | cgaggtcagg | agatcgaggc | catcctggct | aacacagtga | 1080 |
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| cccagctacc | caggaggctg | aggcaggaga | atggcgtgaa | cccgggaggg | gtagcttgca | 1200 |
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| aaggcgacac | atggcccggg | gcagtggctc | aggcctgtaa | tcccagcact | ttgggaggcc | 1380 |
| gaggcggtg | gatcacgagg | tcaggagatc | gagaccatcc | tggttaacat | ggtgaaaccc | 1440 |
| cgtctctact | aaaaagacaa | aaaattagct | gggcgtgggt | gtgggctcct | gtagtcccag | 1500 |
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| ctttgatctc | cttaacctcc | tgatctccac | aggaccaga | gcataagaat | gtcccttctt | 1800 |
| tgcttccag | tcccactatc | tagaaaagag | aggaggagcc | cagctcttca | tttcaccccc | 1860 |
| cccaacaaac | tcccaacttt | ccggccctca | aggggtgacc | aaggaagttg | ctccacttgg | 1920 |
| ttttccacaa | acagcctgtg | ccccaccagg | ctcaggaggg | cagcttgacc | aatctctatt | 1980 |
| tccaagacct | ttggccagtc | ctattgatct | ggactcctgg | ataggcagct | ggaccaacgg | 2040 |
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| ctcagttttc | ctaagtaatc | aaaaacctga | taaagataac | aagaatgagg | aattatcttg | 180 |
| agaaaaatgta | aaatctttcc | ttttattttt | tgagacaggg | tctcactctg | tcatccaggc | 240 |
| taaagtgcag | tggcacatc | atagctcact | acagccttga | actcctggac | tcaagtgatc | 300 |
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| gagcgtgagc | ctcctacctc | atcctcccaa | agcactagga | ttacaggcat | gagccactgt | 480 |
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| atgaaaacaa | tacttgaatg | taatcagaca | cagaaagact | gttcaaggct | atgagtagct | 660 |
| gagtcacagc | tcgatcact | tgccacacaa | cagccaataa | gtctagagac | aaggatattgt | 720 |
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| agggctctgag | gacgttgtaa | aacttctttt | ttctagggtca | ggtcacatg | ttcctataca | 960 |
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<211> 2526

<212> DNA

<213> Homo Sapiens

<400> 103

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<222> (1005, 1015, 2239, 2651, 2724)

<223> unknown base

400> 106

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<211> 3326

<212> DNA

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<400> 107

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| ctactaggc | cacctcttga | tgatacctct | tagtgtgtct | tttgggtcaa | atccaccca | 180 |
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| gcccttttat | ggctgtttct | tagcgaaacc | tcacaacatg | cctatggggg | gggaattgat | 240 |
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| gaatcccga | gtttgagacc | agcctaggca | atatagcaag | acaccatctc | tacaaaaata | 5040 |
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<211> 3476

<212> DNA

<213> Homo Sapiens

<400> 116

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| aaaactgtaa | gaaataaatg | ttgttctcat | aaattacaca | gttccaggta | ttctgttatt | 180 |
| agcaacagaa | aaagagactag | gacagatctc | acagttagat | tgtattctac | acattgtgac | 240 |
| tggttctcca | gagaagcaat | gcataaaaag | aggaataatc | ggccgggcac | gggtggctcac | 300 |
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| cgtgggtggg | cgcgccctgta | gtcccagctc | ctctggaggc | tgaggcagag | gaatcacttg | 480 |
| aaccaggag | gcagacattg | cagtgaagctg | cgattgcgcc | actgcactcc | agcctgaaca | 540 |
| acagagccag | actccgtctc | aaaaaaaaaa | aaagagggaat | aatctccaaa | atagtaaaaa | 600 |
| aattcctgca | gacaggaaat | ataatggtag | atacctgagc | taggagaggg | ggaatgggga | 660 |
| actattattc | aattgatata | gtttcagttt | aggaagataa | acaagctctg | ggaataaaaa | 720 |

252/341

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| gtcaaaatat | gcatacgaaa | aggttatggg | gtaaaggcag | aggtaattat | ttttttcccc | 960 |
| gaaaggtatt | ttctacaatg | aatgttttta | tgtaataaaa | aatgaaatga | caaaagttta | 1020 |
| gaatgtttgt | gggttttgtt | ccttaaatcc | ttaattacat | aaattaatat | ctacattata | 1080 |
| cagattaaga | tacatatatt | tcctctatct | acaacatttc | tccattctct | gtatcttaaa | 1140 |
| tcctgacatt | aaatgtcatt | aaattttctta | aatctcaaga | gaacgacttg | gttaccaagg | 1200 |
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| gggagaataa | tttaaatatt | tttattctac | catggtggcc | ctaatttttc | agggggcagt | 3420 |
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<211> 11429

<212> DNA

<213> Homo Sapiens

<400> 117

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| tctggatgac | atttctgcga | gagcggctcc | ggagcggcgg | tcggggagg | agaggtgcgc | 360 |
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| ttctgcccgc | ctcccagactc | cgatcttgtc | aatgaagaat | cgggccaggā | tcgcccggga | 660 |
| gcggacgccc | accctccgac | cgggctcgca | ggctgggagt | cccctctgcg | aggctggcat | 720 |
| ggccgcccct | accgggtccc | gcgcctctg | cggaccctgc | cccgggttgg | gcctggcccg | 780 |
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| gactgacagc | tggcgagagg | gcgcccgggc | tgggggaaag | ggagggaggg | ggctcatcgg | 900 |
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<211> 20

<212> DNA

<213> Homo Sapiens

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20

<210> 125

<211> 18

<212> DNA

<213> Homo Sapiens

<400> 125

atgggtgaca cgccggtg

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<400> 126

cttcgactcg gctcaga

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<212> DNA

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16

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<212> DNA

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<400> 130

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17

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<212> DNA

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<400> 132

aattgacgtc atggtaat

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<210> 133

<211> 16

<212> DNA

<213> Homo Sapiens

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<210> 134

<211> 17

<212> DNA

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<400> 134

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<211> 16

<212> DNA

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<400> 135

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16

<210> 136

<211> 2932

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 136

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| ggttttgaag | tatgagttat | ttaaagaaa | tggaatatt | tttagattat | gtagtaaaaa | 120 |
| ataaagtgat | ttttttttt | taaatttat | taataaattg | ataggtaata | tgtgaaagtt | 180 |
| atagaatgta | gattagagga | tataataaat | ttattttttt | tatgtttata | agaagtaaga | 240 |
| aaagttttga | tgtgagttag | tattgtttta | taattttgaa | ttgtgtagat | tgtacgtatt | 300 |
| tttttttagt | ttgaagtaaa | tagtggatag | gaaaaaatat | taaatggttg | tagtaaatat | 360 |
| ggaaggaaat | tataattaat | gtaatatgtt | aaatatgtt | atgtttattt | tattaatttg | 420 |
| aattaaaaat | taagaattta | aaatgttttg | gaaaaatacg | ggtattgatt | tgacgtttga | 480 |
| agttttaaaa | tatttatatat | tttgaaatag | tatttgtatt | ttgaaatatt | tgtttttata | 540 |
| tattttttta | aatttttttt | tttttttatt | ttatttatta | ttaaataaag | gatgaataga | 600 |
| tgtaatattg | aaattgttaa | gtatgttgaa | gaaagattat | tgtagaaaaa | ttttttttag | 660 |
| tttttttaaa | ggtgttagga | agtagaaaag | tgatatagaa | ttggagaggt | cggagttttt | 720 |
| gtattaattg | tattaaatgc | gaatttcgag | aaaatttttt | ttaattacgt | ttttagttaa | 780 |
| tatggatatg | aagaatttat | tgaattttga | aagacgtggt | tatataagtt | gaaatgtttt | 840 |
| taatgattta | gttgatgcgc | gtttttttat | ttgttttttt | tagagaggtg | taacggaagt | 900 |
| tagaatattt | tttttgaaa | tttaatttgt | ttcgtagttt | ttcgaggaat | tagtattttg | 960 |
| ttaattcggg | tcgggagtag | ttatttgtgg | tgaggttgat | tggttgggta | ggaatagcgt | 1020 |
| cggggcggtg | gttgagtata | gtcgtttcgt | tttttttggt | ataggaaagt | tgagttttatt | 1080 |
| cgagtacggg | tttttttaag | tttaaagaag | tagagggtcgt | tggttcgtttt | tttttaggttt | 1140 |
| ttttattaaa | gtcggagtat | ttttttttta | aattttacgt | tttggtggtc | gttttaaggga | 1200 |
| gcgcgaggta | gggttacgta | aagttgggag | ttattatggg | atagttttta | agtgttaggt | 1260 |

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| ttttagat | tttgaatt | gtttttac | gagaagggt | ttttgagg | tggatagt | 1320 |
| gaagtttt | ggtaagtt | tggggatta | gtggggttag | at | aggagttt | 1380 |
| ggagtagc | ttaaatcg | gtggtatt | attatgtgt | tcggagcg | tatagttcg | 1440 |
| gcggtgcg | gatttgttt | ttgagttcg | ggcggtgg | tgggagga | tatcgttcg | 1500 |
| ggcgattg | atcgggagg | agaatcgat | tggcgcg | taaagtttag | aacgcgtgt | 1560 |
| tagat | at | cgtggagat | ttggagatt | cggtatagg | aaagttttg | 1620 |
| tagtgttat | cgcggttag | gtagttggg | tattaacgg | ggcggtttt | ttttattgt | 1680 |
| ttttggtt | gacggggat | tagaggttag | ttttatttt | agcggtttg | aggtttatg | 1740 |
| at | tgagttcg | tttttttta | ggtcgggat | gattttga | gggatcgta | 1800 |
| tggaggag | aagaaga | at | attgaata | aaaaggta | tagtttgtt | 1860 |
| tattttata | gtttatat | ttgcgagat | tgagtaatt | at | tttagtttg | 1920 |
| aaataaat | tatgttgt | tttttaatta | tttttaagaa | acgtaagta | gtttttggaa | 1980 |
| ttaataat | tgttttag | agaagttgt | tgggttagtg | gagtatagta | tatgtattt | 2040 |
| ttttgttt | tttgttttt | tttttaatga | tatataat | tttatatatt | tatgaaatg | 2100 |
| ggtatatg | agcggtttt | atatgttcg | aatgtgta | gattaagttc | gggtatttg | 2160 |
| aggatatatt | at | tattttatt | ttatgtgtg | ataataat | aagtttttta | 2220 |
| gttattttg | aatatata | atatgttaa | ttgtagttat | tttcgtttg | tatcgaatat | 2280 |
| tggaatttat | ttgttttatt | taatcgttt | tagttattta | tttaattttt | tttattttat | 2340 |
| ttttttatt | ttttcggtt | tttttttta | gttttggtg | gtttttttt | tagttttttt | 2400 |
| gttttagata | ggcggtatt | tatatgtgt | ttgtttttat | gaattttt | tttttaagt | 2460 |
| ttgttggtc | tttatacgt | agttatatg | gttggtgat | ttgttttg | gttttaggtt | 2520 |
| ttgtttcgg | taaatggtta | tgtaaat | gcgtttgtg | tttggttgat | gagataga | 2580 |
| gttaaaagta | tatttaggt | gttaattgt | aataaatatt | tgtatataat | attggtaag | 2640 |
| taattatata | gggaaaata | ttatttaa | taaattttga | ttatggtgt | ttgtttttat | 2700 |
| agaatattta | aaattttatt | aaatagatt | attgttagta | gtaaattgta | aaatagatta | 2760 |
| gtaagtttaa | taataattaga | aattgtaag | taaattataa | gataaattag | ttaaatatat | 2820 |
| taataattata | agaaattag | tttttttagt | taagagaaaa | aatataaatg | tggaaattaa | 2880 |
| atatattttt | aaaaataatg | ttaagtttga | attagaaatt | ttaatatgaa | tt | 2932 |

<210> 137

<211> 2932

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 137

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| atatttgta | tttttttt | tatatgaa | agtttggtt | tttataat | taatgtgtt | 120 |
| gttaattta | ttttataat | tatatattag | tttttaatat | tattaaattt | attagtttat | 180 |
| tttataattt | attattaata | atgaatttat | ttagtgaagt | tttaaataatt | ttataaagg | 240 |
| agagtattat | gattaaaa | tatttttaaat | aattattttt | tttatatgat | tatatatta | 300 |
| atattatata | tagatat | ttgttagtta | ataattttaa | tgtatttttg | at | 360 |
| ttattagtta | ggttataaac | gcgatgttta | tatagttatt | tatcggaagt | aagagtttg | 420 |
| attatagagt | agattattag | tagtatatgg | tttacgtgtg | ggcgattaat | attatttgaa | 480 |
| aagtagaagt | ttataagata | gaaatatata | tgagtattcg | tttggttg | gtaggaaagt | 540 |
| tgagaaagag | gtatattaa | attaaggga | agaggtcgg | aagggtaaaa | aggtgaaatg | 600 |
| aaaagagggt | ggtgaatgat | taagaacggt | tggataggat | aaataagttt | taatgttcga | 660 |
| tagtagacga | gggtgattat | agtttagta | atattgtata | ttttaaagta | gttagaagat | 720 |
| ttaaaaatggt | attaatatat | agaaatgaaa | tatat | gtgatgtatt | ttttaaatat | 780 |
| tcggatttga | ttattatata | tttcgggtat | gtaaaaaacg | tttttatgta | ttttatttta | 840 |
| taaatatgta | aaatattatg | tattatttaa | agaaagaata | aaaaagatag | ggaaaatgta | 900 |
| tatgttgtgt | tttattttagt | taataaattt | ttgttttaag | tagggatatt | gatttttaag | 960 |
| gttagtttgc | gtttttttaa | aataatttaa | aataataata | tgttatttat | tttagagttg | 1020 |
| gaggttagaa | ataaattatt | taaatttcgt | aattatgtaa | attatgaaaa | tgaaataagt | 1080 |
| tagttatttt | ttattgttta | gtttaaaaaa | gtttttttt | tttggttttt | tattgcggtt | 1140 |
| tttttaaga | ttattttcga | tttgaagaga | aatcgtagtt | tattagttaa | atgtatgagt | 1200 |
| tttaggcgcg | ttggagggtga | gattaat | tagtttttcg | tcgaagttag | agagtagtaa | 1260 |
| gagggagcgt | tcgctcgttga | tgtttttagtt | gttttggtcg | cgatgggtat | tgtaggggtt | 1320 |
| tttttggtcg | cggggttttt | agtattttta | cgaaggtaga | gttgggggtt | tggtagcgcg | 1380 |
| tttttgattt | tgttcgtcgt | tagtgcgatt | ttttttttcg | gttttagtcg | tcgcggacga | 1440 |

| | | | | | | |
|-------------|-------------|------------|-------------|-------------|-------------|------|
| tggttttttt | tatttatcgt | tcgcggggtt | agagagtagg | ttttcgtatc | gcgcggggtt | 1500 |
| tgccgcgttt | gggtaatatg | gttttagtgt | attacgggtt | gggcgttgtt | ttaggagttt | 1560 |
| ttgagtttag | atttaatttt | atttggtttt | tatggatttg | ttagaggatt | ttatatattt | 1620 |
| tacgttttaa | gaagtttttt | tttcgtgaag | attaagttta | ggaaatttga | aagtttgata | 1680 |
| tttggggaatt | gttttatagt | agtttttagt | tttgcgtgtt | tttatttcgc | gttttttgga | 1740 |
| acggttatta | agacgtgaaa | ttttggaaga | agatatttcg | atttttagtgg | aaagattttaa | 1800 |
| aggaaacgaa | tagcgggtttt | tggttttttt | agtttggaag | agtcgtttatt | cgaatgagtt | 1860 |
| taggtttttt | gtggtaaaga | gagcgaagcg | gttggtgttta | gtttacgttt | cggcgttgtt | 1920 |
| tttggttagt | taattagttt | tattatagat | gattgttttc | ggttcggatt | gattgaatgt | 1980 |
| tgatttttctg | agaaattgcg | aaatagggtt | aatttttagg | aggaatgttt | tggttttcgt | 2040 |
| tgtatttttt | tagaaagggt | aagtagagaa | acgcgtatta | gttgaattat | tggggatatt | 2100 |
| tttaatttatg | tagatacgtt | ttttaaaagt | tataataagt | tttatattta | tataattata | 2160 |
| ggacgtaggt | aagggaattt | ttttcgggat | tcgtatttaa | tatagttaat | ataaaaattt | 2220 |
| cgattttttt | aattttgtat | tatttttttg | ttttttaata | tttttgaaaa | ggtaggaga | 2280 |
| aatttttttg | tagtggtttt | tttttagtat | gtttgatagt | ttttgagtta | tatttgttta | 2340 |
| ttttttattt | gatgataaat | ggaatgaaag | aaaaaggaag | ttttaaaaaa | tatatagaga | 2400 |
| taggtattttt | aaggtataaa | tggtatttta | aagtgtgtaa | tattttaaaa | ttttagacgt | 2460 |
| tagattaatg | ttcgtgtttt | tttaggggat | tttaaatatt | tatatattta | tttaaattag | 2520 |
| taaaataaat | atagtatgtt | ttagtatat | atattagttg | taattttttt | ttatatattt | 2580 |
| tgtaaatatt | taatatattt | ttttgtttat | tattttattt | aaattgagga | aaagtacgtg | 2640 |
| aaatttgat | aatttaaaat | tgtaaagtaa | tgtaaattta | tatttagagtt | ttttttattt | 2700 |
| ttatgaata | tagaggaaat | aggtttgttg | tatttttttag | tttatatttt | atgattttta | 2760 |
| ttatattatt | attagtttat | tgtataagtt | tagaagaaga | aaattatttt | gttttttatt | 2820 |
| gtatagtttg | aggatgtttt | tatttttttt | aaataattta | tatttttaaag | ttataatttt | 2880 |
| ttttttattt | tgattataaa | ttttttttat | tttgatatat | tttgtttttg | gt | 2932 |

<210> 138

<211> 7432

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 138

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| ggaagtgatc | gggttcgagt | ttatttagga | agaaatagag | gttgagata | tgagatttgt | 120 |
| ttgttatttt | tttttattaa | tttttggtt | ttattgaggt | tttattataa | gtttggtttt | 180 |
| gtagtttagt | gattaggaga | aattagatat | aagataataa | taatagtaat | gatttttttt | 240 |
| ttttttttga | gacggagttt | tggttttttcg | tttaggttgg | attgtagtgg | cgcgatttcg | 300 |
| tttaagtga | agttttattt | tttaggttta | cgttattttt | ttgttttagt | ttttcgagta | 360 |
| gttaggatta | taggcgtttg | ttattacgtt | tggttaattt | tttatatttt | tagtagagat | 420 |
| gggtttttat | cgtgttagtt | aagatgggtt | taattttttg | atttcgtgat | tcgtttgttt | 480 |
| cggtttttta | aagtgttggg | gttataggta | tgagttatcg | cgtttggtta | atagtaatga | 540 |
| tttttgagta | tttatattgt | tagttttttac | ggtaagagtt | ttttttattt | tttgttttgt | 600 |
| tttgttttta | gatagagttt | tggtttgtta | tttaggttgg | agtgtagtgg | tgtgatcgcg | 660 |
| gtttattgta | gtttttattt | ttcgggttta | agttattttt | ttgttttagt | tttttaagta | 720 |
| gttgggatta | taggtacgta | ttattatttt | tggttaattt | ttgtattttt | agtagggata | 780 |
| gggtttttta | ttatgttggg | taggttgggt | ttaaattttt | ggttttatat | gatttgttta | 840 |
| tttcgggttt | ttaaagtgtt | gggattatag | gcgtgagtta | ttgdcgtttt | ttttgtattt | 900 |
| gtttaagtaa | tatatgaaa | tatgtattgt | gttttttatt | ttatggagga | ggaaattgag | 960 |
| gttagtaaat | gaggttggtta | tgggaggtgg | agataggatt | tgaatttggt | ttagttaggt | 1020 |
| aggtttaaga | gtttttgttt | tttttttagg | tattgtgtgg | gagggtgaga | aggaggagg | 1080 |
| tttatagagg | tatgattttt | gattgtttatt | gttattttgg | ttttgttttt | tgaagttttt | 1140 |
| gttaagcggg | gaggtggtcg | ggggaggggt | ttgtttttgt | tagttttttt | tttttcggtt | 1200 |
| cgtagagttg | agtatagagg | gatagaggta | cggaaatttt | agaaatgttt | tttttttagaa | 1260 |
| ataggtttta | ggttttggtt | gttttggtgt | tttgcgtgtt | ggttttgggt | tgtattgggg | 1320 |
| gtgagaagaa | gtgggtggag | ggatgtgggg | tttatatttg | gtgggtgtga | gtgtggttgt | 1380 |
| gtgtttttgt | gttttgtagt | tacgtgagat | atgagtacgg | agtgtgtgcg | ttttatggcg | 1440 |
| tgcgtagtga | tgtgcgtgtc | ggggagtggt | tgtgtcggtg | gttgagagtg | aagtgtgaat | 1500 |
| gttatatttg | tataaattgg | gattattttg | gtgtgtgtac | gtgcgtgcgt | ggaagtggga | 1560 |
| gtatgtagtc | gtggtaaaaa | agtgtatgtt | tgtgtgtata | tgtgtatttg | tgtgtatttg | 1620 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| tttttttgtg | gggtatgtgt | gtgtaaaata | tttgagtgtg | tggatatgtg | tgaggggggtg | 1680 |
| agtgtgtgtt | gggtgtgtacg | tttgtgtttt | gtatatgtat | tttttttttt | tttttttgaga | 1740 |
| cggagtttta | ttttgttatt | taggttggag | tgtagtggtg | gtagtgggtg | gatttttggtt | 1800 |
| tattgtatga | ttcgtttatt | cgttttaagg | gatttttttg | ttttagtttt | tagagtattt | 1860 |
| gggattatag | atatacgtta | ttatgttttg | ttattttttt | tttttgagac | ggagtttcgt | 1920 |
| tttgttattt | aggttggagt | gtagtggcgt | gatttttggt | tattgtaacg | ttcgtttttc | 1980 |
| gggtttacgt | tatttttttg | tttttagttt | tcgagtagtt | gggattatag | gagtttatta | 2040 |
| ttacgttttg | tttaattttt | gtatttttat | tagagacggg | gtttcgtcgt | gttagttagg | 2100 |
| atggttttta | tattttgatt | tcgtgattcg | tttgtttcgg | ttttttaaag | tgtaggattt | 2160 |
| ataggcgtga | gttattgctg | ttggttaatg | tttggttaat | ttttttatat | ttttggtaga | 2220 |
| gatagggttt | tggtatgttg | tttaggttgg | ttttgaaatt | ttgattttag | gtgattcgtt | 2280 |
| cgttttggtt | ttttaaagtg | ttgggattat | aggtatgagt | tattacgttc | ggttatgtat | 2340 |
| tttatgttaa | aatgggatta | tatttttagat | tagtattatt | tagtagaaat | ttaaattttt | 2400 |
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| gggtggatcg | taaggttagg | agatttgaga | ttatttttgt | taatagatgg | gtaaaaaatt | 2520 |
| atttttatta | aaaatataaa | aaattagtta | tgatgggtgg | tatgcgtttg | tagtttttagt | 2580 |
| tattcgggag | gttgaggctg | gagaattatt | tgaattcggg | aggtagaggt | tgtagtgagt | 2640 |
| cgagatcgcg | ttattgtatt | tttaatttggg | tgatagagcg | agatttcggt | tgaaaaaaaa | 2700 |
| aaaaaattta | atacgtatgt | agataatgtg | taaggtatta | ttttatgtgt | atcgtatgta | 2760 |
| gtaattttta | atttttacga | taatttttag | gtagatatta | ttatttcggt | ttataaaaagg | 2820 |
| gaaatagttt | ttggggagat | aggataagtt | atcggttaaag | gtatatagtt | agttatatgt | 2880 |
| gttttcgcgc | tgacgggttg | tttttgtagg | cgaagttttg | tttagatgcg | tgggtagaag | 2940 |
| gtttgggtcg | gaaagaggaa | ttgatagtaa | ggttaagtta | atgtttgttt | ttgggggtag | 3000 |
| aaagttattt | tttggttttt | ttttattgtt | tatagaggta | gtttagatag | gggtgggggtt | 3060 |
| ataggagaac | gaaggggagaa | gggggtagtt | tttgggtagt | aaaattaggt | gggtgaaggga | 3120 |
| ggtatttagag | gatggtaatt | agagaggtta | ttagagggga | attataggta | gatagggtga | 3180 |
| taggagggat | tattgatata | aggtgaagag | atggtttagt | cggacggggg | ggtttatatt | 3240 |
| tgtaatttta | gtatttttggg | agttcgaggt | gggtggatta | tttgagggtta | ggagttcgag | 3300 |
| gttttaatat | ggtaaaaatt | tatttttttt | aaaaataaaa | aaattagtcg | ggtatgatgg | 3360 |
| tagatgtttg | taatttttgt | tattcgggag | gttgaggtag | gaaaattggt | tgaaatttagg | 3420 |
| aggtggagggt | tgtaatgaga | cgagattatg | atattgtatt | ttattttggg | taatagagta | 3480 |
| agagattgat | tttggtttat | aaaaaaaag | aaaaaagaaa | aaaaaaaaga | gatggttgat | 3540 |
| ggttaaagag | gggttagcgg | ttaggggata | tataagggtta | aaggtaggag | gtaagaggat | 3600 |
| tggtaggggg | ttgttttttg | gttatcggga | gcgatatagg | atgagtatgg | agggaaaggg | 3660 |
| agaaggggat | tttaggggtt | tagtttatatt | aagttgtttt | ttgggtttat | ttagttatgtt | 3720 |
| agttagagggt | ttaggaagga | attttgagtt | ttttattaaa | gttaaagatg | agtcgttgga | 3780 |
| gtttgggtgag | gggttaggatg | aaggagttgt | tggagatagt | ggtgaatagg | attagagacg | 3840 |
| ggtgggtaatg | gttttgggtga | gggtgtgttg | ggttgggtgg | tgggagggga | tttttgggtt | 3900 |
| tgagggagga | gggggtgggg | tttggttttt | tgagttttag | ggaggaggaa | aggggtgggag | 3960 |
| tggggttgtg | attttttaggt | ttgggaggag | ataaatgggg | gagttgagag | taggaatttt | 4020 |
| aggttatag | agaggagcgg | tgtaggagtt | cgagtatttt | tcgggggttt | ttgggggttt | 4080 |
| attgtgatg | tttttttttt | gatttgggtt | cgtttattaa | ggtttggttt | ttcgaattta | 4200 |
| attatgacga | ttatttgagg | atttatagtt | tgtgttttag | gtttgtttgt | ggggataagg | 4260 |
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<220>

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| ttttattatc | gttatttttt | aatttcgtgt | tttagttttt | tttaagtttt | tatgtggttt | 9240 |
| agggaaggag | gtttcgcgga | attggaattt | cgcggttttg | tcgtttttat | ttattttatt | 9300 |
| taattttatc | ggtagcgggt | tttcgtgggt | ttgtgttttt | tacgcgtgta | tacgtacgcg | 9360 |
| tagatttcgg | tttttgtttc | gtttattttt | tcgagttttg | gggttttagtc | ggttttagtt | 9420 |
| tttttttgtc | gtcggcggtt | ttttagaaa | ttgtgggtat | tcgggagcgg | agcgtcgcgg | 9480 |
| gtgtgttggg | cgctcgggtg | ggggggaata | gcgaggatta | gacgtcggga | agttattttt | 9540 |
| taatatattgc | gagaggtaga | tacggcgga | tttagtgggt | tagttagttt | ttttttcgga | 9600 |
| gattttgggg | cgtttgcgtt | attgcggaga | ggcgcgggga | tgggtcggat | gattttttatt | 9660 |
| attatttttt | attttggtga | ggttattatt | tttggcggtt | gtttattttt | ttaaaggttgt | 9720 |
| attattttac | tagttttcgc | gtatttttcg | ttatcgtaga | gggttggggg | cgtttttagtt | 9780 |
| ttcgttttcg | tcgatggggg | gaggggatgg | gggaagtggg | agagtgggtg | ttgcgtcgtc | 9840 |
| gttttttttg | ttgttttttc | gtcgaattta | tgtatagagt | tgtgtaaaat | aggtcggggc | 9900 |
| ggttttatttg | tattttatgt | taatgagtag | attttttaag | tgtttttttt | ttttggcggg | 9960 |
| agtttttggt | tttattttga | gtatgcggcg | tttaggtttt | gaatttcgtg | tcgttttttg | 10020 |
| ggaaaggggg | gttattttatg | gttgtttcgc | gcgtttgata | tttttttttt | tttcgagagg | 10080 |

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|-------------|--------------|-------------|-------------|-------------|-------------|-------|
| tcgtagtttg | tcgggtcgg | ttgtttttt | cgtaggata | gaggtttcgg | ggttggcgcg | 10140 |
| agaagtaggg | acgtttaata | ttttttttt | gtagagggga | aaatgaggat | agagaggttg | 10200 |
| gttttagttta | atgattaggt | tttttggtgg | ttagtaggtt | ttatatattt | atttattatt | 10260 |
| tcggttattt | ttgggttttg | gattgaattt | tgtttttagaa | tatgttcgaa | aggagggtag | 10320 |
| gtataaacgt | attattttaga | taaattgaga | tttataatgta | tttttttggg | tttaggattt | 10380 |
| aggggagatc | ggttacgtaa | gataggattt | gattttttgta | ttcgggtatgt | tgggggttgat | 10440 |
| ggtttagtcgg | agatgtttat | tttttagttt | agtgttagag | aggaggtaga | ggtagaattt | 10500 |
| ataggggaagg | taaagaagat | ttgaaattat | ttttatttaa | tttttagttt | ttaagtttta | 10560 |
| gttttgatat | tattttttta | gagtggtttt | tttttttagta | agtattttta | tgttatttta | 10620 |
| gtgttaagggt | gttttaggata | tagtatcgag | ttagatataa | gtttggaatt | ttatagtatt | 10680 |
| tagtttaggt | tgggattata | tgtttggtgt | tgtagtaatg | aaatgattat | ttttttattt | 10740 |
| aggttttgtg | tttttagagg | ggttatgttt | attttgttta | ttagggtttt | gttttagtgc | 10800 |
| gggtataaaag | ttgttaggtg | aatgaatgat | tttaggttagg | gaaaggga | taaagggata | 10860 |
| agaaattttt | ttttttgggt | tttagttttt | taataaagat | attaagttta | attaagaggt | 10920 |
| tttttgggtt | tgaggaagaa | ttttttttat | atatattttg | tttagttagt | tttttttagtt | 10980 |
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| tattttaata | gttttgagag | ttgggtggat | ggttttttat | tttttagata | aggaaggggg | 11160 |
| gtgttttagaa | tgatgaagtt | atttaagtga | tcgttttagac | ggtatgggtt | tgtttttagt | 11220 |
| gattttgggt | cgtaggtgtt | tcgttggttag | aatagggtgt | atatttaaga | gggatttagta | 11280 |
| aggggaagg | gatgttgtag | gaatttttat | aatgtttgtt | ttgagtgaga | tttatgtggg | 11340 |
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| ttttttttt | taattttattt | atagaatttt | attatcgctg | gtatatttta | ttttaggagg | 11460 |
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| aaggtttttt | tggttttttagt | agtttttttt | gggtttttgt | gttggttagt | tggaggggtg | 12180 |
| aggatgtttg | gtatagtcga | tttttaaaag | tttttagagg | atagtttttt | tttttgtttt | 12240 |
| ttttatttcg | ttagttttat | tattttgtat | ttgttttttt | taaagtatgt | gttttagttt | 12300 |
| ttatttttta | atttaaggaa | gatgtatgtg | tttaaggatg | gatttaggag | tattttttta | 12360 |
| tatttagggg | aaaggatgag | gttataggaa | ggtttttttt | gtagtaagaa | ggatttagat | 12420 |
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 <211> 3720
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> chemically treated genomic DNA (Homo sapiens)

<400> 142

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| attttataga | tatatattata | tttatatagt | taaggatggt | gatttttaata | atattgggtat | 120 |
| aagtaaaaaag | ttggaaattg | tttatatggt | tatggatagg | ggataaatcg | attaatttta | 180 |
| ggtttttttt | tataatggag | tattatatag | ttttgaaaaa | gaatgataag | atttttatgt | 240 |
| taggatatgg | tataattttt | aagtattttt | aagtgaaaaa | ataataataa | taataatatt | 300 |
| gtagaataat | gtgtatgggt | ggatatatat | aaattttttt | gaaagaatat | ttaagaaatt | 360 |
| taaagtgtgg | tatttttagga | gttaggaatg | aggtaggtgg | agaggaggga | tttttatttt | 420 |
| tttaatttaga | atatattttg | ttgtgttagt | tgattttttt | tttattgtta | ataagtatta | 480 |
| tagttttttt | taatttaaat | tatttttttt | agtataaatt | taaaaaaaa | aaatttaaaa | 540 |
| tggaaaaata | tataggcgtg | agtaaaagaa | atgaatggta | ataatttttg | tgggtttattg | 600 |
| agtgcgtttg | gatattttatg | tggttttagt | ttttttttat | aggaaatgta | taggtgagaa | 660 |
| attgacgtta | agggggattg | agtgttaagt | tagtttagtg | tagagggtag | atttaaat | 720 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| aatacggttt | tttttgttg | tttttcggtt | tttgttttta | ggtgggaagc | gtatttatcg | 780 |
| gacggtcggg | tcggtgaggg | gtagcggttt | agattggcgt | attcgcgggt | ttagcggttt | 840 |
| acgtttgggg | agcgcgcgcg | tacgtagcgg | cgcgagtttg | goggcggcgg | cgataataat | 900 |
| aacgttatag | ttcgagtttt | tttttcggga | gttttcggta | tatatattgt | gtttatgttt | 960 |
| gggtatttac | gttacggcgg | tagggtcggg | gttttttaaa | atggtagtgg | ttcggggagt | 1020 |
| cggaagttcg | gagttagcgt | cgtcgtagtt | atataagtgg | gggggttggt | ggttggggga | 1080 |
| gttcggtagc | gttttgagga | ggcggagggt | cgtcgttcga | ggtcgggtcg | ggcggagcgg | 1140 |
| ggcgtcgcgg | tttttcgatt | tttttttttag | aggtgagtgt | tcgaagttag | gagttcggcg | 1200 |
| tttatagggt | tgtgcgttgc | ggggaatttt | tatcgttagt | tttttcggtt | ttcgcgcgtt | 1260 |
| tttaagttta | gcgggagcgg | tttcgggcgt | tttatagtcg | gcgtcgcgtt | atgtttttatt | 1320 |
| tttagcgagtt | tttcgaattc | gacgcgtttt | tcgttaagtt | tattgaaggt | tgttgcgtcg | 1380 |
| aatttagcgt | tgaattgttt | cgttgttttg | ttaggagcgt | tttcgcgggt | atcggttatt | 1440 |
| ttggagggtaa | ggagggcgag | taggggtgtt | tagacgacga | cggcgtagcg | cgggggcgta | 1500 |
| ttatatattga | gaattaggag | ggattgggat | attggagtta | tgagaatagg | ggcgatggga | 1560 |
| agtttaggag | ttttgggggtg | cgtatttttta | tttttattta | tattgggtcg | ttagcggttt | 1620 |
| cgtaggaatt | tgtgcgggtta | tcggagcgtt | tttttgtttg | tgtacgtgtg | ttttgcgtgt | 1680 |
| gtatgttttt | atgtgttttt | tgggacgtat | gcgggttttt | gttgaattag | aatgtgtaaa | 1740 |
| aggatattttg | tgtatattcg | tgggtattaa | gagttttgta | ggtaggggtt | gtggatttag | 1800 |
| gtgtattttt | tgatgtgttt | agagtgtatt | tttgtttttt | tttttagtagg | cgattttttg | 1860 |
| agttgggttt | tgaatagttg | cggcgttaagt | ggggatttag | tcgatttttg | ttttttggag | 1920 |
| gggtttgcgt | ttatatattt | tttcggtttt | agttatagcg | gtagtttttt | tatttaggta | 1980 |
| gttcogaat | attcgtaacga | ttcggaggta | ttttttaatt | ttatgtcggg | cgtttttaggt | 2040 |
| ttgggtatttt | ttttcgggtt | agaggtagta | gcgttttagat | tttcgttggg | tgtttttttt | 2100 |
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| gttcgttttt | tcgtaatagg | gattaagatt | gaggatttgt | tgttttattag | ttgttttgcg | 2460 |
| gaattgtcgg | tcgttttagt | ttaatagatt | tatttttagcg | gggtttatga | cgtttttttcg | 2520 |
| ttggtttcgg | gtgatttagg | ggagggggtt | gagggttttt | ttgggttttt | gattttttttt | 2580 |
| agtggggagg | gagggagtag | cggcgacggc | ggagagtttt | tggttagtag | gtagtttttag | 2640 |
| tttttttcgt | tgggttttcg | tagcgtcgtc | gcggcggatt | tttttaaat | tttgggtggcg | 2700 |
| gatatttttg | gaagtagtgg | cgtgggtgta | ttattcgtgt | cgtcgtcgtc | gtttattttt | 2760 |
| tttttttagg | tttaaggcgcg | acgtaagggg | cgtcgcggcg | gtaaatgtag | tacgcgttgt | 2820 |
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| atttatatcg | gcgagaagtt | ttttgtttgc | gacgtgtcgg | gtcgtcgttt | cgcgcgtagc | 3060 |
| gatgagaaga | aacggtatag | taagggtgtat | tttaagtaga | aggcgcgcgt | cgaggagcgg | 3120 |
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| gggtttatgg | gttggggcgt | cgtcgttcgg | cgcgtagcag | tttcgggtcg | tttttttttt | 3240 |
| cgtttttttt | tttaattttt | ttcgtacgtt | cgagggtcgg | ttttcgtttc | gttttttagtt | 3300 |
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| tgaataggta | ttattttggg | atttaagata | gttttttgta | attgtatacg | ttttacgttt | 3480 |
| ttttttataa | tttttagaga | taggttgggg | taggttaagg | cggttttcgcg | cggtattttg | 3540 |
| tatagtagtg | ttttatttag | tagtcgattg | gatgtaacgt | tttgttttgg | gttttttttt | 3600 |
| ttttgttgt | tgttaatttt | tgtaaagtag | acgttatatt | taagtagttg | ataaaattgt | 3660 |
| ttatttttgt | aattaaaatt | attgtgttaa | aagttttatt | aatttgttat | gtaagttttt | 3720 |

<210> 143

<211> 3720

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 143

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| atagttttgt | taattgtttg | agagtagcgt | ttgttttata | aaaattaata | ataataaaag | 120 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gaaaaaaaat | ttaaagtaaa | acgttatatt | taatcggttg | ttggataaga | tattgttgta | 180 |
| taaagtttcg | cgcgagatcg | ttttggtttg | tttttagttt | tttttggggg | ttatagagga | 240 |
| aggcgtgggg | cgtgtgtagt | tataaaagat | tgttttgaat | tttagggtag | tgtttattta | 300 |
| ttgggtgggt | ttagaagatt | ttttttaaa | cgcggttgat | aagggtgata | gcgtttggat | 360 |
| cgcgggaatt | gttcgcgcgag | ttggtgttga | atagggcgtg | tgccgcgggc | gttttaagga | 420 |
| aatggaagc | gggacggagg | tcggttttcg | ggcgtgcgag | gaggagtgg | aagaagagcg | 480 |
| gggaggggaa | cggttcggaa | ttcgtgcgcg | tcgaacggcg | gcgttttaat | ttataaattt | 540 |
| atTTTTTgtt | tagagagaag | cgaaggagag | gttttagcgag | taaaagtoga | ggTTTTTgag | 600 |
| tcgtTTTTTcg | gcgcgcggtt | tttgtttgag | gtgtattttg | ttgtgtcggt | tttttttato | 660 |
| gttgccgcgcg | aagcggcggt | cgtatacgtc | gtaagtaaaa | ggTTTTTcgt | cggtgtgggt | 720 |
| gcgtacgtgg | ttggtgaggt | ggtcgttgcg | gttgaagttg | cggaggtaga | tgccgtattg | 780 |
| gaagggtttg | tggttcgtgt | ggatgcgtag | gtggcgattg | agttcgtcgg | agcgcgtaaa | 840 |
| gtttcgtata | taatttttta | tcgggtaaag | gaagggtttg | gcgtgcggtc | gcgggtagaa | 900 |
| gtagcgcgtg | ttgtattttg | cgtcgcggcg | ttttttgcgt | cgcgttttgg | tttgggggaa | 960 |
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| ttgaggttgc | gtattggtta | gaaatttttc | gtcgtcgtcg | ttattttttt | tttttttatt | 1140 |
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| cgggaaaagc | ttataggttt | cgttgggata | gagtttggtg | gttgggacgg | tcggtagttt | 1260 |
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| ttttaggaag | taggagtcgg | ttaagttttt | atttgcgtag | tagttgttta | aagtttagtt | 1860 |
| taagaagtcg | tttgttgagg | agggagtagg | aattagtttt | gggtatatta | aagggtgtat | 1920 |
| ttgagtttat | agtttttatt | tataaaattt | ttggtgttta | cggatatata | taaagtgttt | 1980 |
| tttgatatatt | ttgatttagt | aggggttcgt | atacgtttta | aggagtatat | agaaatatgt | 2040 |
| atacgtaaaa | tatacgtgta | taggtaaaag | ggcgtttcga | taatcgtata | ggtttttcgc | 2100 |
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| taatatttgt | taatagtagg | aggaaagtta | attagtataa | tagggtatat | tttaaattga | 3300 |
| aaagtaaaag | tttttttttt | ttattttatt | tatttttagt | ttttgaggtta | gttatattta | 3360 |
| agttttttgg | gtattttttt | agaagaattt | atgtatatatt | aattatataat | attgttttgt | 3420 |
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<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

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| ttaatattat | gggtatgggt | tgattttgtg | agtatatatt | tatagtatat | atlttatttgt | 6480 |
| gtaataaaatt | tgtatatattt | atatatatat | ttgggagttt | aaaagttgaa | ggaaaaaata | 6540 |
| ataaaaatata | ttttttattta | tataatttag | aagtaattga | gtttattatt | aaaatttttta | 6600 |
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| tggttttacgt | ttgtaattttt | agtagtttgg | gaggttaagg | cgggtggatt | atlttgaggtt | 6720 |
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| ttattgttgt | ggtaaattttt | ttttttatttt | tttatlttaga | gtacgtgttt | ttgtatgtga | 7380 |
| gatgagtttg | ttgaatatag | tatatgtatg | ggtttttgatt | ttttatttta | tttgttagtt | 7440 |
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| gttttttttat | agtgttaatg | gtttttataa | tttggtatgt | ttttgtagtg | gttgggatta | 7620 |
| atltttttttt | tttatatttta | gtgttttttt | taggagtttt | tgtaatgtag | gtttggtggt | 7680 |
| gataaaaattt | tttaaatattt | gtttatlttgt | gaaggatttt | atlttattatt | tatttataaa | 7740 |
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| tatttttttagg | tatagggata | attaaatata | ggttttggttt | ttttatatag | ttttttattt | 8160 |
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| gtgtatgttt | tacgaagttt | ttgtgttgtg | tttttttagtt | ttattaggtt | atlttatgttt | 8340 |
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<210> 148

<211> 5312

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 148

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| ttcgcgttcg | taaaacgggg | tggataacgt | agtttaagg | agagtcgcgt | taaggttttt | 120 |
| cgttgctcgc | gggttttggc | ggtttgatcg | ggtttgggt | tcgagcgtgt | tttcgggttt | 180 |
| gggggggtcg | tcgcgatgga | ttcgttggt | gcgttttagg | atcgtttggt | ggagtagttg | 240 |

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| cggttcgtaa | gcgtttaggt | ttagtttttt | ttttcgttag | ggtttcgtag | gttcgcgggtt | 420 |
| ttacgggtggg | gcgacgtgtt | ttgttttaggt | tttattttac | gcgatttttaa | aacgcggcgg | 480 |
| agaatgcggt | cgtgggattt | tttttaggggt | tttaaggggt | tgccgggggtt | gggcgttttg | 540 |
| gcgcgcgggc | gggggagggt | cggcgtcgcg | gtttataaat | aggcgtttgtt | tcgttatcgt | 600 |
| cgttgctcgc | gttttcgcgg | ttggattcgg | gttaggtggg | gtttttcgtt | ttttggtatt | 660 |
| tttcggaggg | gtgagtgtcg | aggtttttag | ttttttcggg | ttatggaggg | ttttgagtgt | 720 |
| gttttagggg | ttttaatttt | gttgtttttt | gttcgaggag | ggaggatata | gtttgtgttt | 780 |
| gttgcggttt | gatatttttt | tacggaataa | atatagtgtc | ggtttttgta | gagttttttt | 840 |
| tgggattggg | gttaggggtg | tttttttttg | ttattatttc | gtttgttttt | ttatttttag | 900 |
| gtttttgttt | acgggttttt | tttttatttt | tgtaacgaa | atgttttatt | ttgggaatcg | 960 |
| tattttttgt | tgttttttta | tatcgtattt | ggtaagagat | agggtattgg | gtttttggag | 1020 |
| aaatttttgt | gtttttattt | tgttttattt | tgtttttagg | atattgataa | gtagtacgtg | 1080 |
| ggtttcgtta | tattgtttta | ttaggtgtat | cgtaaagtcg | tgaagaaagg | ttttgatttt | 1140 |
| atatttatgg | tggttggtga | gtgggttagg | tttttcgggg | gagtgggttg | ggttattggt | 1200 |
| tagttaagtt | ttgtcgttgg | agtttttagat | ttaacgtagt | tttttttttg | tatttgtgtg | 1260 |
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| ttaataatat | cagtggttga | gtgaggtttg | ttgagaaagg | ttttgttttag | gcggttatag | 1740 |
| tattcagaggt | ttgggttttat | tttttttttg | tttatagttg | gaagtttatt | atcgattatg | 1800 |
| tggttagta | gtttgagtag | tattttcgtg | atgagagcgg | ttttaatcga | aagaatattt | 1860 |
| aagataatcg | agtgtattgt | tgtttatatt | ttattttttt | tttcgggtat | gggtgtgtgg | 1920 |
| ttgttttggg | gttaggttcg | ggagtgtagt | ttttataata | tggttttttg | gttgtgttta | 1980 |
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| gagattcggg | agttgaaggg | gcgggtgagt | ttgtcgtcgt | atagggggtt | ggttagggtt | 2160 |
| ttgggggtga | gagtattagg | gggatttggt | tggttttaaa | tttgatgggt | tttggtttat | 2220 |
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| gagatgttgt | agaggatgaa | gtagtagatg | taggattagt | gacgttcgtc | gcggatatat | 3960 |
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| atatttgggg | attaggagcg | aagttgggcg | ggattttaga | gattcgtttt | ttttgtttttt | 4200 |
| ttttcgtttt | cggacggtta | tagtatttaa | atcgtaggtt | ttgttttggg | aggtaggtaa | 4260 |
| agttaggtag | aagaggattt | ttaggatttt | gggtttgttt | ttgtttttag | tggtgtagaa | 4320 |
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| ttgggtcgtt | gggtgtagtt | ggagagagtt | tgggttagat | tttagaggga | tttttagtcg | 5160 |
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| ttggatggag | tcgggtcggg | agtttggtta | tttagagatg | tcgtttagggt | gttcgtcgat | 5280 |
| gttcgggttt | attgcggcgt | tttttttgta | gg | | | 5312 |

<210> 149

<211> 5312

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 149

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| agtatattga | ttgtcgggtc | ggtttttatt | agtttttgat | gttcggcggt | tcggtagttc | 120 |
| gttagttttt | ttattttgat | tatttcgtac | gtcggttgga | agtttttttt | aagtittgatt | 180 |
| taagtttttt | ttagttgtag | ttaaaccgatt | agagtttttt | ttaattcggg | tcggtttagg | 240 |
| gagtagtcgg | gggttcgatc | ggatttttaga | tttatcggag | tttatggcga | gaagacggta | 300 |
| gttcgggtta | ttttgtagcg | ggagggcgtag | gcgggagagt | cgagcgataa | ggtcgttttcg | 360 |
| tttttgttac | gttcgtatcg | attatagtg | tgccgttttg | ttagaaatag | tttagagggtc | 420 |
| gcgggaacgc | gcgttgtagc | ggtagatagt | atattatcgt | cggagggtcgt | aggtcgttta | 480 |
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| ttattaatat | tggttttttt | ttattaggat | aggacgcggt | atttataacg | gaagaaaacg | 600 |
| gagtatcgtg | tggcgggaag | ggattatgcg | ggtgggaata | tcgggagggt | taggttttagg | 660 |
| atcagagatt | ggttaggggt | tggtggggag | aagagggttc | gagcgagggt | aggggacggg | 720 |
| cgggttggtg | agaaggggtg | taagcgggta | ttagtgtttc | gggggttttt | taggtcgggt | 780 |
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| taggggttagt | tgggggttgt | agatataatg | atgtgggagg | gggtggtgtt | gagaataaat | 1260 |
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| | | | | | | |
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| agtttaagtt | tgggtggggt | gataggatcg | gttttttagtt | atggagacgt | gggcgggggt | 1860 |
| agaggggcca | ggtttggttc | gcggttgggg | cgcgatattg | gttatttgtt | ggatgtagtg | 1920 |
| cgcgcggtag | ttttcgtagt | gtacgtcgta | cgttacgttt | ttgaggtcgt | gtatatgcgt | 1980 |
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 <212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 150

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| ttattcgaag | ggcgtatttt | ttgggaatgc | gtattttcga | ggcgtaggag | attttgaggg | 8580 |
| taaagatgcg | gtattttgagt | ttttcgtttg | ttttttaggt | tatttttgtt | gtttgatttt | 8640 |
| gogtcgtttt | tatttagaag | tttttaaaat | tattattaag | aaaagaaaga | ttttataaga | 8700 |
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| acggattttat | atgttcggaa | gttttaggcga | tattaagtta | gcgttgggga | attgacgtat | 9480 |
| ttttgtagtc | gtagggcgtt | ttatgttttt | ttgttttttt | ttttgttgtg | ggtaacgttt | 9540 |
| tttgccggag | atttagaggt | ttttaagggg | gatatgttag | ttatattggt | tttggcgttt | 9600 |
| tgagttaagt | attaggattt | atagtttagt | acgaaggtag | gtagtatttt | tattcgtcgc | 9660 |

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| tgtagcgtc | gagatttga | gtagagggtt | ttggtttgaa | ttatcgattg | gtaaagaaa | 9840 |
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| aggtagttta | tggagcgtag | cggtaaagag | taaggggttg | gtggttttag | aatggaattt | 9960 |
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| ttttagtttt | tttattgggt | aaacgggata | atgggatatt | agcgtttatt | ttatagagtt | 10080 |
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| gagtggttcg | atttcgttgt | tgtttgtcgc | gggagaggaa | taagttttcg | attagcgttt | 10680 |
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| tatttgagg | ttcggaaatc | ttagggtatt | tcgaatgcgg | tgtaaaattt | tttttttttt | 11040 |
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| taagtagaga | ttttatttgt | gtagtaattt | tatttgtgtt | ttaaattcgt | ttagttaatt | 11880 |
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<211> 4316

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<213> Artificial Sequence

<220>

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<400> 152

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| agaagaagag | gaagaggaag | aggaagaaga | agaagaagaa | gaagaagaag | aagaagaaga | 240 |
| agaagaagaa | gaagaagaag | aagaagaaga | ggaagaagag | gaagaagaag | aaattgtttt | 300 |
| tagatttttta | tttttaggat | aagtttattg | tttggtatta | agttttttgg | ggtgaatttt | 360 |
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| agggggagg | ggagggggag | ggtaaagttt | taggggtttt | ggagtgggtt | tttaagggtt | 600 |
| aggtttcga | gcggtgtttg | gggttggaag | gttttagtatt | gagaattttt | tattttttta | 660 |
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|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gttgggggta | tggcggttccg | aagttttttt | ttgtttgtttt | tagggggtttt | ggttttgatc | 900 |
| gatatttggg | cgggtgagtg | cggggttttag | agagaaacgg | tttttgtggg | gaggagttag | 960 |
| gggttcggtc | ggtgggggag | taggatttag | ggagtcgctg | tcggaggagg | gtttggcggg | 1020 |
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| gtaagagggg | tcgtagtatt | gggagtggat | tataggttac | gttaagggtta | acgtatagat | 1260 |
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| tggagaatgg | gaaggagacg | ttatagcgcg | taggtattag | gggttatggg | cgtttttttt | 1860 |
| attttttgta | gatttttttg | gatggtttcg | tataagggtg | ggaggaaagt | gggtttaatg | 1920 |
| ttaggataatc | gttttttttt | tagtttttag | taggaagaat | ttttttggtt | ttcgagattc | 1980 |
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| tggtgtttgt | tggttttaaat | atttatagtg | aatataagta | gggtgtgtgt | ttgtttgatt | 4200 |
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<210> 153

<211> 4316

<212> DNA

<213> Artificial Sequence

272
391

<220>

<223> chemically treated genomic DNA (Homo sapiens).

<400> 153

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| aaatagggtg | tgaagaagtt | tgtgatattg | atgtggttaa | agttaatatt | ttgatttagt | 180 |
| ttgatggaga | gaggaaggta | tatgttcgat | tggtttttga | ttacgatgtt | ttgggtgttg | 240 |
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| tatatatata | tattttacgtg | tatgtttata | aaatatattt | atttgtattt | ataaaaagat | 420 |
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| atattttatga | ataaattcgt | attagttata | gtgagaggta | atattttaaa | tagttttattt | 600 |
| tatgttttaag | atattttaagt | taaaagaaatt | taatagtata | gttgagtttt | ttttgttttt | 660 |
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<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 154

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<212> DNA

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<220>

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<212> DNA

<213> Artificial Sequence

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<223> chemically treated genomic DNA (Homo sapiens)

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| aagataattt | taattatttt | ataaaaattg | aaattgaggt | atttaatatg | aaggaagtat | 180 |
| ttaaataaatt | ataaggaagt | attgaagatg | aagttatggt | tttttttgga | tagattgatt | 240 |
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| tgatttttgg | agatgtagtt | aataaggtta | cgttatgttt | tatgaaaggt | tgtatgagag | 1620 |
| tatttgtggt | tttaattaaaa | tttgaaagtg | aagattttata | gtagggttatt | gtaagtgttt | 1680 |
| tgaggaattt | gttttgccga | gtagatgtaa | atagtaaaaa | gacgttgcga | gaagttggaa | 1740 |
| gtgtgaaagt | attgatggaa | tgtgttttag | aagttaaaaa | ggaattaatt | tttaaaagcg | 1800 |
| tattgagtgt | tttatggaat | ttgttagtat | attgtattga | gaataaagtt | gatatatgtg | 1860 |
| ttgtagatgg | tgtatttgta | tttttggttg | gtatttttat | ttatcggagt | tagataaata | 1920 |
| ttttagttat | tattgaaagt | ggaggtggga | tattacggaa | tgtgtttagt | ttgatagtta | 1980 |
| taaatgagga | ttatagttaa | attttaagag | agaataattg | tttataaatt | ttattataat | 2040 |
| attttaaatt | ttatagtttg | ataatagtta | gtaatgtatg | tggaaatttg | tggaattttt | 2100 |
| tagtaagaaa | ttttaagat | taggaagtat | tatgggatat | gggggtagtt | agtatgttta | 2160 |
| agaattttat | ttattttaag | tataaaatga | ttgttatggg | aagtgttgta | gttttaagga | 2220 |
| attttatggt | aaatagggtt | | | | | 2240 |

<210> 157

<211> 2240

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 157

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| ttttgaatga | atgagggttt | tgagtatggt | aattgttttt | atgtttttat | atgttttttg | 120 |
| gttttttagga | ttttttgttg | agagatttta | taaagtttta | tatgtattat | tgattattgt | 180 |
| taaattatga | gatttttaagt | gttgtaataa | agtttgtaga | tagttgtttt | tttttaggat | 240 |
| ttgtttgtgg | tttttatattg | tagttattaa | gttgatata | tttcgtaata | ttttattttt | 300 |
| atttttaata | atgggttaaag | tgtttgtttg | gtttcggtaa | gtaagagtgt | taattaaaaa | 360 |
| tgtaagtgt | ttatttatag | tatatatatt | agttttat | ttagtgtaat | gtgttgataa | 420 |
| attttataag | gtatttaata | cgtttttgag | ggttgatttt | tttttaattt | ttaaagtata | 480 |
| ttttattaat | gtttttatat | ttttaatttt | tcgtaacggt | tttttattat | ttatatttgt | 540 |
| tcgttaagat | aaatttttta | aaatatattgt | aataatttgt | tgtaagtttt | tatttttaga | 600 |
| tttttagttg | gttataagt | tttttatgta | gttttttata | gagtatagcg | tagttttgtt | 660 |
| ggttatat | ttaaaagtta | agtttggtta | agttatttta | gtatatcggt | ttagtgtaat | 720 |
| attgtagtgg | ttattagtaa | gttcgtatat | tttatagttt | atttgtaata | attttgtaat | 780 |
| ggttttagt | tttttttagt | tatttattgt | atgtttatgt | tttttattaa | atgaaagttt | 840 |
| tattagaata | tatatagtag | gatagatttg | atgtttaata | ggagttggta | ttggattttt | 900 |
| gttttggttt | atgtttggtt | tatgagtttt | ttgttatttt | taatagggtt | tatagtaagc | 960 |
| gogtatttgt | tttaaaagat | gaaggattcg | gattttacgt | ttgttttttt | tggtattagg | 1020 |
| ttgtgagtga | atgatgttgt | ggagtgttgt | attgggtttg | gttcgagttt | ttttatttgt | 1080 |
| tcgggaattt | tttaataata | tagagttttt | gttattgtta | tgtaaaagtt | ggatgaggag | 1140 |
| aggaagatat | ttagattgtc | gtatggatat | atagtgtgtt | tgaggagttag | atatagttag | 1200 |
| taaagttcgc | gatataattat | ttttattatg | agtattaagt | attgataata | atgaatatat | 1260 |
| tattttttatt | ttggttttta | gatgatttgt | tagttttcga | ggtgtagagt | gtgtgttatt | 1320 |
| agaatttaaa | atattgggtg | ttttatgggt | tattcgtgta | gttgaatttt | gattattatt | 1380 |
| agaagttgtt | atgttgattt | ttttattttt | ttgattttta | ttttgtcggt | tagtattatg | 1440 |
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| taaaggaaga | ttatttattt | tttttagtgag | attttgaagt | tgagcgtaat | attagttttt | 1740 |
| tttttttttt | tttttggtta | gattagtaag | aagtaatgat | tttttttttt | taagtttttt | 1800 |
| taaatattta | gtattttttt | tgttttttatt | tataaatttt | ttttttggaa | atgaatttat | 1860 |
| aggaatagga | ttgtattttt | tagaacggtt | tgatatagat | ttttttcggg | ttttataaga | 1920 |
| acggagggat | atttttgatc | gtagttttat | tttagggaaa | ttattgttat | tttaagttaag | 1980 |
| ttttttaaga | cgttttaata | aatttaatttg | tttagaagaa | gttatagttt | tatttttaatt | 2040 |
| atttttttgt | agttgtttta | gtattttttt | tatatagat | gttttagttt | ttagttttgt | 2100 |
| aagatgattg | gaattatttt | ttagtttttg | tcgaagattt | gagtttttta | tttttagtgt | 2160 |
| tttaatttgt | tttaataatt | gattataatga | agttgtagtt | atttttgggt | atttttggat | 2220 |
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<211> 8169

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<220>

<221> unsure

<222> (2047, 2136, 7481, 7492, 7502, 7503, 7505, 7511)

<223> unknown base

<400> 158

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| atagtgaaaa | atttagatat | attaagaaaa | gttaagagta | taaaattaag | ttatatggga | 120 |
| gaaaaacgtt | gtttttttac | gttttttaaga | taaaattttt | aatgttaggt | taaatagta | 180 |
| atgttagaat | taaaaaaagt | taaagaggag | aataattatt | ttagggtttt | tttaggggag | 240 |
| aaaaaaatga | aggaaatgat | atattgattt | gtaaattatg | tatagtaaga | aattgtaaaa | 300 |
| gatgaatttt | tgtaatatga | atttgagaaa | taaaaaaaa | aaaaataatt | gtattttaag | 360 |
| gaatgaaatt | attattttta | attaagaaga | taatattttt | aatttaaaat | taggaaaatt | 420 |

| | | | | | | |
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| aaatagatgt | taaggagaag | atatttgttt | aaaaatagag | tataaattta | aaaattaaaa | 480 |
| ttttttaaaa | ttttattaaa | attagataat | attttaagaa | attttgttgt | tttaaatata | 540 |
| aggaattaga | ttttggtttt | gtattagtgt | ttgttttttg | gtttttttatt | tgagaacggt | 600 |
| taatttttag | aaaaatatat | aaataatttg | tttttaattt | tagttaaggt | aataatatat | 660 |
| aaaatttttt | ttatttagttt | atattttatt | agtttttttt | aatttttagat | ttttttatttt | 720 |
| tttaatttttt | atatttttagt | tttataattt | tttttttttt | aaaaatgtgg | gataattaat | 780 |
| tattttatttt | tatttgatta | tgatatagat | atttatttttg | tatatatgat | ttaatataaa | 840 |
| attttaagat | tttaaattat | atgagtttat | ttataaatat | ttatttttatt | tatagttaat | 900 |
| ttattttttta | ataattatat | ttatatttttt | tataaaaaatt | gagatattag | atggagttgg | 960 |
| ttattattttt | aagtttttttt | aaattaaaata | atttatatagt | ttgttaatat | gaggtgtttta | 1020 |
| tttatataag | agttataaag | ttaaatatat | gggtatttgt | agataattta | gaaaatataa | 1080 |
| ttttttgtttt | tttttttaga | ggtaaagggt | tattttgttg | tttaggttag | agtgtagtg | 1140 |
| tgtgattata | gttttattta | gttttgaatt | ttgggtttta | gggattttttt | tttttttaggt | 1200 |
| ttaaagagtag | ttgggattat | aggtatatgt | ttgggttaatt | tttaaaatttt | tttatggaga | 1260 |
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| tgttttaggt | ttgggtttata | gttttatgat | tttaatagta | taggttaaata | taaaattgat | 1500 |
| tagtgttggt | gttttagaaat | tgatatgtta | aaatattggt | tttgatagct | taaattaaag | 1560 |
| aagttttaag | gttttttttga | ttttttttttt | aatttttatta | tttttttttaa | agaagttgaa | 1620 |
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| ttgttttttt | tattgtttta | agaaaagaag | attaaaatgt | aatttatattt | aagtagatttt | 1740 |
| ttatagaagt | ataatgattg | tttttaagga | ttattttaaat | tttaaagaaa | attattttata | 1800 |
| agttaatatt | tgttgtttta | tttaattattt | ttttttattaa | ttattttattg | ttttttaata | 1860 |
| aattttttttt | tttttttttat | aatttgtttt | attagaatttt | aagttttttta | tttttttttgt | 1920 |
| aattttaaga | ttagtgtata | aattttttata | atttatttgag | ttaggattttt | tagtaattttt | 1980 |
| ggggggcgag | agtatagttt | taatatagta | atatagtaaa | atattttatga | tatgtagaag | 2040 |
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| taatatataa | tataatatat | gtatatatgt | gtaaatatat | ttaaataaat | atatatatata | 2280 |
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| gaattaaatt | ttggtaaaat | agtttgagtt | aattattagtt | gtagggatta | aagggaatttt | 2460 |
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| gaaatatatt | ttgggggtaaa | atatttttgat | cgtttttttag | gttgtttattt | gttatgtgat | 3240 |
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| ttttttaatg | gttaatgata | ttaaagggttt | ttatatgggtt | atttgttatt | tgtatatattt | 4140 |
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| tatttttttt | taggttaaatt | tttttagtat | cgttataggg | ttttttataa | agtaaaagtt | 4320 |
| ttaaatttat | ggagtttaat | ttattaatat | ttttttttat | cggttttggt | attaatgtta | 4380 |
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| aaaanannaa | taaaaagnaa | aaataagant | atatatatat | atatatatat | atatatatat | 720 |
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| atttaagtgg | taaaatttaa | gtagatgatt | ttatattttt | gattaaaggg | ggttagggag | 1860 |
| gttaatatag | taaatgggga | aattgatata | aaataaatat | atatatatat | ttaaattatt | 1920 |
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| atgaaataaa | gattcgaaag | gaattggaat | aaaaattttt | tgtattttat | gttaaggggg | 1860 |
| aaatattaga | attaagtgtt | tcgcgtgatt | gaagatattt | tttcgtttta | gaatgtaaag | 1920 |
| tatatttaat | aaaatagttg | gattataaatt | tttttttttt | ttttgggggt | cgtgggggtg | 1980 |
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| gattcggtcg | ttaggatttc | gtcgttgtag | atttcggttg | ttttcggcgt | cgtcgcgggg | 2280 |
| tttgcgttta | gttcgggtgt | atttgtgggt | tatttgattt | ttcgttaggt | cggcgacgat | 2340 |
| ttttttcgtc | gttatcgtcg | cgatttcgtc | gagatgttta | gttagttgta | tttgacgttt | 2400 |
| tttatcgogc | ggggacgttt | tgttacgggt | gtggaggagt | tttttaggga | cgggggtgaat | 2460 |
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<210> 161

<211> 2501

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 161

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| agttttttta | ttatcgtggt | aaagcgtttt | cgcgcggtga | agggcggttag | gtgtagttgg | 120 |
| ttggatattt | cggcgaagtc | gcggcggttag | cggcgaggaga | agtcgctcgtc | ggtttggcgg | 180 |
| agggttaggt | ggattatagg | tggtatcggg | ttgaagcgtag | gtttcgcggc | ggcgtcgggg | 240 |
| gtagtcgggg | tttgtagcgg | cgaggttttg | gcgatcgggt | ttcgggatgc | ggttggatgg | 300 |
| ggcgtgtgtt | cggtttggga | ggagaagatg | ttcgggtcgg | gggcgggttt | cgggggcgcg | 360 |
| gcgtttatat | ttttcgtatt | ttattcgtag | tttttttgcg | atagttttata | atggatgtat | 420 |
| tttattatta | tttttcggtt | atcgtatttt | gtttttttag | cgtgcgttat | tttttttaga | 480 |
| tgaaaagtaa | cgggggttaa | cggatatttt | cgtttttagt | tttattttac | ggttttttaga | 540 |
| gaaagaagag | gagttataat | ttagttattt | tattggatgt | gtttttgtatt | tttgacgag | 600 |
| ggggtgtttt | taattacgcg | gaatatttga | ttttggtgtt | tttttttttg | tatgagatgt | 660 |
| aggaaatttt | tatttttaatt | tttttcggat | ttttatttta | tgaggtacgt | tattatttagt | 720 |
| aagtattgtt | aattattagtt | tatttttttt | gtgatgttga | aagggttaaag | aaaaaataaa | 780 |
| ttataaagta | aaaaattagg | tcggtttttt | tgtatatatt | gagtgaaggt | agggatatata | 840 |
| tattataagt | aatacggtta | aaaagaatgt | attaagttgt | ttggaaatta | aattttattcg | 900 |
| aatgtatttt | aagtaaaaaa | ttttaaaagg | ttttattgaa | agttatatta | aatttaatttt | 960 |
| ttgtgtagag | aattttatttg | tattttttta | gtatagtatg | attttttggt | aagttttttt | 1020 |
| tttgtaaaat | taaaataaat | gtataaggta | acgattttat | taatttttag | tatttttttag | 1080 |
| ttatagttga | tttgaaattt | tttaatgaat | taggagtcgc | ggggagaggg | agtaaaaaatt | 1140 |
| aggaggattt | ttagatcgat | tttttagatt | ttgttttata | gaaatgttaa | ttcgtaggaa | 1200 |
| ttttaatcgg | agatttttaag | agttcgagaa | aaaaaaaagg | tagcggcggc | ggtagatgaa | 1260 |
| ttataaattt | tagttcggta | ttcgtagaag | ttttgtgatg | tttttttttt | ttcggtaatt | 1320 |
| tatacgcgcg | tatatacgcg | cgggtatagg | tatgaatttt | tattttacggg | atcgtttttac | 1380 |
| gttttttttag | gagagagata | ggggagaggg | gacgatgaag | gagtcgggga | cggaggtagg | 1440 |
| aaattttttt | tgattaaatt | tcgaatagta | aatgtatttt | tcgaaaagtt | ggttgataaa | 1500 |
| tgaagggtta | acgcgttttg | ttcgtcgggt | tcgagcgtta | gaagttcgcg | ttgtgtgtgg | 1560 |
| tgccgagagg | gggtggggga | aggaggtggt | gggggagggt | tttatttttt | tttttttttt | 1620 |
| ttaaaaagga | tgattgttac | gaagtttttt | tttttggaat | tttttttttcg | ttgtatttta | 1680 |
| tcggcgattt | tcgttttcgg | gttcgcgtatt | tttttttttt | tttttggttt | tcgcgcggcg | 1740 |
| cgttggttac | ggtcgttttt | cggagttttc | gtcgcgtagt | tcgttttcgag | cgttgacggt | 1800 |
| cgtcggtagg | gagggttcgg | agtttcggta | ttttttggtg | gtagcggcgg | cggcggtagc | 1860 |

| | | | | | | |
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| gcggcgccgggt | tacggagagc | ggcgccggcg | agcgccggcg | gcggcgccgggt | aggcgccgcg | 1920 |
| gagggcgccg | cgccggagga | agggcgccg | agcgccgttg | tggtgtttgt | ttttttat | 1980 |
| tattttttgt | atagttcgat | cggttttttg | tcgctaact | tatacggtt | atttaaaaa | 2040 |
| agaagaaaga | aagagttttt | ttttgagtta | ttcgatcggt | tttttcggtt | cgtttttttg | 2100 |
| ttcggtttaa | aggcgctcgc | gtaggttcgg | gagtgccgcg | tttcgctcgg | ggtatatggc | 2160 |
| gcgcgggggtc | gcggtcgggg | agggcgcggt | cggttcggtt | attcggttct | ttcggttcgt | 2220 |
| tcgcgggggtt | cggttagtg | gtggcgccgg | cggtataggt | ttttcgccgc | gtcgccgcgc | 2280 |
| ggtgggtgtg | cgccgggttt | ttgttttag | tttcggttag | gtcgcggtgc | gatttggtgg | 2340 |
| tcgttggggt | tcgcgacggg | gtgggggttt | tcgggggaatc | gtacgcggtc | gggtcggggc | 2400 |
| gacgacggag | tgccgagggg | ggcggttggc | gggaggtgc | gttatgaaa | taagggttgg | 2460 |
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<211> 6277

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 162

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| aaataaaata | aaaaattggt | tcggtgtggt | ggtttatgtt | tgtaatttta | gtaatttggg | 120 |
| aggttgaggt | ggaaggatcg | tgaatttagg | agttgaagat | tagtttggtt | aataaagtcg | 180 |
| gattttgttt | ttttaaaaaa | attaagttta | attaaatatt | tttaaaaaata | ataaattagt | 240 |
| tattagaatt | ataaatttgt | attgtttttg | ataatgtaat | gtattgtttt | gtaaaatatt | 300 |
| ataattaaga | ttgttatttt | aaggattttg | aagttttgtg | agattaggtt | tttttttgaa | 360 |
| attttaagat | aattattttt | tagttttttt | tattttttgt | ttttatttag | aattaagttt | 420 |
| attattaaaa | cgtagttttg | ttgacgttaa | gtattttatt | atatgatatg | taattatttg | 480 |
| ggtcgttaaa | atttggttag | aatttttggt | aattttattag | gatttttagt | aaaaaattag | 540 |
| gaaaatgaag | tgattgattt | agtttggtta | aagcggatat | tttgaaatat | tattttttta | 600 |
| ttttaagaaa | tattttttgt | taggtgcggt | ggtttacgtt | tataatttta | gtattttggg | 660 |
| aggtcgagga | aggtagatta | cgaggtttag | agatcgaggt | tattttggtt | aacgcggtga | 720 |
| aatttttatt | tttattaaaa | atataaaaaa | ttagttgggc | gtgatggcgg | gtgtttgtag | 780 |
| ttttagttat | tcgggaggtt | gaggttaagag | aatggcgtga | attcgggaga | tagagttcgt | 840 |
| agtgtattag | tcgcgatcgt | gttattgtat | tttaggttgg | gcgatagagc | gagatttagt | 900 |
| tttaaaaaaa | aaagaaaaaa | aagaaatata | tttttttatt | cgttaggga | attaattttc | 960 |
| gttttttttt | tttaaattat | ataattggaa | attaatttag | atatttttga | gttttttttag | 1020 |
| ttggtgggtt | aattaagaga | aaataggaag | tgggagattt | tagtttagtt | ggattatatt | 1080 |
| taggttttta | taaggaattt | tttttggttg | gtatgtaaaa | aaattttttt | agtaagagta | 1140 |
| taatttttga | acgtgtgtaa | atacgaaagt | tatggttaat | tttatttggt | tttttaggtt | 1200 |
| atagttagta | gagttagata | gttgggtttt | aggtttttag | tttttataat | tgatattbatt | 1260 |
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| attttttttt | tttttagttt | taataaaaatt | tttttaatga | aataaatttg | gtaattcga | 1380 |
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| tgggatgaga | aggatatatg | ggtagtgtta | ttttttaatt | tgtagatttt | atttttagtt | 1740 |
| tttagttatc | gttttttagt | attttatgtt | tttaagatag | tgttattatt | ttaaggattt | 1800 |
| ttttttat | tttttggtt | ggtttttttt | ttattgagga | gtcgtgggtt | tttattagta | 1860 |
| gaagtcggat | gtttttgtgt | tcgaaatttg | tgggtttttg | gtttttattga | ttttaagaat | 1920 |
| gaagtttcgg | atttttacgg | tgagtgtgat | agtttttaaa | gatgatgtgt | tttagagttg | 1980 |
| ttttttttga | tggtcggacg | tgtttagagt | tatttttttt | tggtggattc | gtggtttcgt | 2040 |
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| atataaaaaat | tttttaagtt | tttatttatat | ttgttagata | tagagtattg | attgggtcgt | 2880 |
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| gaaaaagaaa | ataattagaa | atattggaga | aagttaaagg | tattattatt | tattcggtta | 6000 |
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| ttttaaat | attttatttt | aaaatgataa | aatgaagttg | ttattttata | aattttttta | 6240 |

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6277

<210> 163

<211> 6277

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 163

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| aaattaaaga | attaatgata | acgtttttta | tttttaaaga | ttttagaagt | tgttttttgt | 180 |
| aattagataa | tataaatttt | gaattttttt | atatattgtt | gttaattttt | tgggtttttt | 240 |
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| cgattaaatt | aatattaatt | aaggtttttt | cgtttttaat | tttttttagt | gatttggttt | 420 |
| tatttttggg | ttttttttta | gtatattttt | gtcggtagta | tttgttatta | ttgacgtttt | 480 |
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| ggtttttatt | ttttatatat | attagtcggt | gtttttttgt | ttgtttttgt | ttgtttttgt | 660 |
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| aggttgggtt | ggaatttttg | attttatgat | tagtcgacgt | ttttaaagat | atagtgtttt | 900 |
| ttttaaggta | tatttttagtt | tttattacga | ggattttttt | acggatattt | agtgtttttt | 960 |
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| cgttttacgt | tttttagggt | tcgtttttat | ttttcgtaa | agaatattta | tttgttagtt | 1080 |
| tcggaatttt | atttttttac | gttagtattt | tagagtatta | tttgggtttt | ttgttttttt | 1140 |
| ttcgggattt | tattattttt | atttagagta | gagggtgaag | gttttttgag | cgtagggttt | 1200 |
| tagttatttg | agaaatttta | tagttttgtt | ttcgtttagg | aagttttagc | gagtttacgt | 1260 |
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| gtttgaaaa | tataattaat | ttaagttaaa | tattttttatt | atttttttgt | atatataata | 180 |
| aagataaaaa | tattttatttt | attaaattgt | tgagagtaag | aaagataata | tatatatagt | 240 |
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| agagcggttag | aagtaagata | gaaaattagg | ataggagtta | aggtttgtgg | gttttttagaa | 6060 |
| ttcgaattg | gcgtaggtgg | tttatttttat | ttttttttttg | taga | | 6104 |

<210> 165

<211> 6104

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 165

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| tttgtaagg | aagaatgaga | taaattatttt | gcgttagttc | gaagtttttag | gagtttatag | 60 |
| attttggttt | ttatttttgt | tttttgtttt | gtttttaacg | ttttggtttt | gtggtttttag | 120 |
| attgggtatt | atattttttt | ttttttttgt | ttttttattt | gtatagtggg | tttttgggag | 180 |
| gttttagtgg | ttttagtat | gtatagtttg | atagagtttg | aggagcgttt | ttagagggag | 240 |
| agttgagtgg | gggagggttt | agttttattt | ttttttttta | agttatatag | atatatataa | 300 |
| atttgttagt | taggtttttg | tggaggatat | gttttttaggt | ttttgttata | gaagttgatt | 360 |
| ttataaggaa | attttagagtt | gtttttttttt | tttgggtttt | ttgtatatat | tttgggtggg | 420 |
| gggggtggat | ttatttatag | agattattttt | tgttaattgga | atttgagaaa | taaaagaatt | 480 |
| aatttttagtg | tttagtttaa | gttttcgtttg | ttggtatttt | agttttttgt | aggaattaag | 540 |
| ttttattttt | aaattgggat | tttaagatttt | ttttttttgt | tttttagagtt | tgtgattggg | 600 |
| gtttgtagtt | taggggttgtt | tgttttttag | tcgtcgtgtt | tatttgttat | ttattcgttt | 660 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| tgtttttaggt | tttgaattaa | tttttttggg | attggtgggt | tttagaögtc | gtttttgatc | 720 |
| gtatcgtttg | cggaaagttt | tttttgtttt | aggttttgtg | cgcggttttt | ggggagtttg | 780 |
| agtgtttcga | gattggttta | agtttgtgtg | tagtgcgaga | gagtaagatt | ggagttcgtg | 840 |
| gtcagtagg | aagagcgagt | cgggggattg | agattgttcg | atttaattta | gggtacgagt | 900 |
| ttggtataaa | tcgcggtatta | atagagatta | tttgatgaag | agattaacgg | agagagaggg | 960 |
| agaggaggaa | agggagttag | aaaatgacga | atggagggag | agggaggag | agatatatat | 1020 |
| ttgagttagg | atttcggggt | ttatttggcg | ggaggtgggt | tggattagag | gcggtggtag | 1080 |
| cggcgggcgc | ggcgtttagt | agagttttgt | ggaagcggcg | gcgatatttg | ggttgggtag | 1140 |
| tgtttttgat | gttttttagc | gttagcgatt | gtttttattt | tcgtcgttgt | gggtcgggaa | 1200 |
| agtttcgtta | gtgtatagta | attaatgggc | ggaggggttt | tttgtttttg | ggttgcgtta | 1260 |
| tttttatggt | tttagaattt | ggaggattta | gtaggatcgt | tttatttgta | tttgtattga | 1320 |
| ggttattgat | ggaaatggtg | ggggatgggt | ggggtattaa | taagtaacgt | ttttaaagt | 1380 |
| agcgggaatt | tgagggtagt | ttgacgttat | ggtgaatttt | attttttagt | tcgggttggt | 1440 |
| tttgaatttt | cgtttttatt | tatttttggg | tttacgattt | ggcggaaagg | gtttaggatt | 1500 |
| gtagggattt | ttttaatttt | gatttttagat | ttttgtttaa | gtgagatttt | aaagggtaat | 1560 |
| gtttttaagg | gtgggttttg | ggtttaagaa | atttgatttt | agtagttggg | attattttata | 1620 |
| gaggggttag | gttcgtggga | aataagagac | ggagttggga | gtaagaattt | tgtagatag | 1680 |
| gagtttaatt | atagttgggt | taatttttgg | ttgtgtgatt | atgggtaagt | aattttatag | 1740 |
| aggttttagt | tattttattt | tgaaatgggg | attataattt | tattttgaag | gaatattgtg | 1800 |
| agaaatagtt | tagcgttttg | gttttagata | ggtagggatt | tataagagtt | ttttgggttcg | 1860 |
| ataggggat | tttctaagat | ttttatggat | atttttcgaa | tttttatttt | ttcggattgt | 1920 |
| tcggggtat | tttttagatt | tatttatatg | gtgaggaggg | gggtcgatgat | ttgttgggtt | 1980 |
| tgaggggtga | gttgtaagg | atagatggcg | aagtttttat | ttagattttt | ggattttttt | 2040 |
| ttttttattt | tggtatttat | tatttgtttg | agtcggttgt | atagttgttt | ttttgttttc | 2100 |
| ggttgttgtt | tggttaagatg | tttttagagt | attttatttc | gggttcgtat | ttttattttc | 2160 |
| gtatttttagt | tttttattaa | agagtaggta | ggtgtgatag | tggtgtgtgg | ttttgtttta | 2220 |
| gattaagttt | atattcgttt | tcggttatat | ttatttatat | atatttaaat | ttattattgt | 2280 |
| tttttaatat | gtgtttattt | tgaattatag | atattaaaa | atagatattg | gttagaagag | 2340 |
| tattttgagg | tggtttattt | aacgtgtttt | aagtttgttt | tcgagttttt | cgggcggtcg | 2400 |
| tattttatata | ttcgtacgac | gatgatttgt | ttgtattaaa | tttgatata | ttacgaatag | 2460 |
| gcgtttttta | ttatatttta | ttacgcgtga | ttttaatagt | ttttatat | cgtagaatcg | 2520 |
| ggttttagtt | ttattgtgtt | tgagcgttta | ggttagtaga | ggtagggatt | aaggcgtttg | 2580 |
| tcgtttatag | cgttttagagt | ggtaagaaag | aagtttttta | gögtttttat | tatttttcgg | 2640 |
| tggaacgcgt | agcgcgcgat | ttgtttagt | cggttcgggc | gttgtttgtg | cggtagcgt | 2700 |
| agtagcggta | tttcgggggt | gtgggcggag | gtaaggattt | tagtttgagg | ttttttgagg | 2760 |
| tagagtagaa | attagttttt | aggtgtgtcg | ttcgtggcgc | gagttacgga | atttttaggt | 2820 |
| tttcgggggtc | gtgttcgtat | ttttgttttt | agtttttaga | agcgtcgaaa | tttttttagta | 2880 |
| cgatattttt | gttttcgcgtt | atattttttt | tttttagggg | ggttggtggt | ttcgtgttta | 2940 |
| aaggaggtag | cgggaacggt | taatttttta | gatgttttta | attgattttt | ttttttttaa | 3000 |
| ttatagcgag | ggaataataa | ttcgggggtt | gggattgggt | atttaagatt | cgtttttcgt | 3060 |
| gggtcggtcg | gtagggcggt | tataggattc | gggattggaa | ttggttcggg | aggatatcgg | 3120 |
| gcgtgttag | cgtagagcgt | gaaataggta | acgtgcgcgt | agagtagggg | ttggatggcg | 3180 |
| gattttgggt | ataatgagtt | tcggattttg | aaggaagata | attttgttg | agattttggt | 3240 |
| cggagttttg | gagtttttta | gtagtttagg | ttcggatttt | cgggttggtg | tttcgggtga | 3300 |
| gagttgtttg | aagagtttgc | aaggtcgtag | tgccgggtatt | gagtggggag | tagtgttttg | 3360 |
| gtttttgtta | ttgggggtgt | agtagaagg | tatttgcgtt | tagttattat | atatttttagc | 3420 |
| ggaaatgatt | tttttttaag | attagagggt | tttaatatata | gaattttttg | aaatcgtttg | 3480 |
| taagtgtgtg | tggtttgtgat | gtgtgttttt | ttaaagagag | agtttaaggt | tttcgttcgt | 3540 |
| gttacgggtga | tcgtaaaaatg | aaagtttagta | gacgtagatt | ttgtgggttat | gttatttttga | 3600 |
| ggggtcggaa | ttttattttt | gattgtgggt | tggtttttta | gttttttagaa | tagatacgtg | 3660 |
| ttttttatta | ttaaattttt | ggtagttata | aattaaagg | tggtgtcgtg | gggcgttaaat | 3720 |
| tagagtttgc | gttttagagg | cgttagtgta | gttttcagta | gtttttaagat | tgattgtata | 3780 |
| agtttgtttt | tttaggtag | gagggacggt | tattaattta | tttttttaagt | atttttttag | 3840 |
| tttgtaggaa | ttgtttgggt | ttttgttggg | ggtcgaaagt | ttttttcgtt | tttgtttgaa | 3900 |
| aattattttt | tttagtaatt | agtattatgt | taggtatttt | agtagacgat | tcgttaaaagt | 3960 |
| taaatgaatg | aaaattttatt | ttggttaaatt | tatttagtttt | ataaggtagt | ttgtagaaaa | 4020 |
| ttcggattta | gttagagcgg | tatttcgttt | tgtttttcga | aattttataaa | ttatttagtt | 4080 |
| agattttttt | tattttattt | gttatagtaa | gtcggttttt | aggtagaagt | tttttaggaat | 4140 |
| gaggtaggga | agtaaggatt | tcgttttagg | ttttttttta | agattgagat | tttttggtgt | 4200 |
| aaaatgcgaa | gttatttttt | gagtttattt | cggattttatt | gagcagcgga | aggaagggtg | 4260 |
| gagtttttcg | tgagcggatt | atttagattt | tatttcgtta | tttttggaat | ttttttgagt | 4320 |
| tttagtatta | aatagagtat | ggtttaacgg | aagtcgttaa | ggaaaatggt | gattttaaaa | 4380 |
| aaatagtcgt | ttgattattt | gatttttgat | ttttattggt | ttatttttta | attttaaaaa | 4440 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ttggaaatta | gggttagttt | tgaaataatt | tgatttttga | aaaaaatatt | tttataatat | 4500 |
| tttaataaag | tttaattgta | atgtttgttt | ttattcgttt | agattagatt | tttgtatttt | 4560 |
| ttgtttaaga | aataaaaaata | aatatgaagt | ttgggtgaaa | atttttacgt | gaattttttac | 4620 |
| gtgattaaaa | aagttatatt | tgaaggtttg | agtttagagt | ttaagttaaa | tttattattg | 4680 |
| ttttataatt | tttttataat | atggatttaa | ttataaaatt | ttagtagtag | taatagtatt | 4740 |
| attagtaata | gtaataataat | agtttataat | atatataatt | tttttagttt | ggtagaaacg | 4800 |
| tggagttatt | aaattaattg | gaaaaaattt | taattgaaaa | tcgattgtat | tgtttaaaga | 4860 |
| agggtagaaa | ttaaagtttt | ttattatcgt | gtttattgaa | gaatatgtta | agagaagtag | 4920 |
| ttgtttttga | attatttttt | taagatattt | ttagattgta | gtaaagttgt | ttttggggaa | 4980 |
| gggagtatag | aaatggttgt | taaagagata | gcgagattta | taataattaa | gatatagaaa | 5040 |
| tagtttaagt | gtttattgat | gaatgaatta | ttaaagaaaa | tgtggtgtgt | gtttattata | 5100 |
| tatatataat | ggaataattag | ttagtagtat | tatttagaag | aaggaaatat | tgttatttgt | 5160 |
| gttaatatgg | ttgaattttg | ggaatattat | gatataataa | ataagtgagg | tatagaaaga | 5220 |
| tacgtaatat | atgattttat | ttatatgtag | aatttttaaaa | aataagtcga | atttagtaat | 5280 |
| aaagggttaga | atggtgatta | tttgggggtg | cggttggggg | taaaagagaa | atattagtta | 5340 |
| aaggatataa | tttttttagt | ataagatgag | taagttttgg | agattttaata | tatagtttgg | 5400 |
| tgattatagt | taatatatgt | ttgaaatttg | taaagagagt | agattttaag | agttttaagc | 5460 |
| gtatatatat | atatatatat | ataggaaatt | atgtgaggta | atgatatgtt | aattaatttg | 5520 |
| attgttgtaa | ttattttata | aagtatatat | gtattaaaaat | attatatatt | atatttttaa | 5580 |
| aataaaaaatt | tttaatatgg | aaataaaaagt | gaaaaaaaaa | aagagtgaga | gatagttgaa | 5640 |
| tttttttagt | gggaattttg | ttgaagattt | tagaagaggg | gtattttgat | aaatattgaa | 5700 |
| aggatatta | atgtttttatt | aataaatttag | atatagaatt | attttaaaga | tgttgtatgt | 5760 |
| gtagtaagta | tgaaaagtta | tataaattat | attaaattga | aataaagaaa | agatattata | 5820 |
| aatattataa | ttattattaa | ttaagtttta | ttcgtgtgtt | aggtatttgt | tgtatattat | 5880 |
| ttttttttatt | tttaaatagt | taataagata | gatattttta | tttttgttgt | atatgtaagg | 5940 |
| gaatagtaag | agtatttggg | ttgaattaat | tatatttttt | aggttttttt | tgaggatttg | 6000 |
| aaatatagtt | tatttttttg | ttatgttagg | taagaggttt | ggtttttttg | atttaggtat | 6060 |
| tgatttagag | gaagatatgg | gtatgtttgt | ttgttttagg | gtta | | 6104 |

<210> 166

<211> 1630

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 166

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| gagttcgagt | tacgttatgt | tcgttgtacg | tgttagtttg | cgtagtatat | tagggcggtg | 60 |
| tttttttttt | tttttttttg | agtgaatat | attaaagggc | gcggtggggg | tggggggtga | 120 |
| ggggaggaag | gaggtgaaga | aacgttatta | gatcgtattt | tttgtaaaga | tagttttgat | 180 |
| ttaaggatgc | gttagagtac | gtgtaggggt | cgatcgtgtt | ggcggatttt | atcgtagtcg | 240 |
| gttttttagg | agaaagtttg | gtagagttag | gcgcgaaatc | ggaggggtcg | cgaggatgcg | 300 |
| ggcgaaggat | cgagcgtgga | ggttttatgt | tttcggggaa | aggaaggggt | ggtggtgttt | 360 |
| gcgtaggggg | agcgaggggg | agtcggattt | aattttttat | tcgttttttt | tttttttcgg | 420 |
| gttatttttt | agaaagttgt | atcgggtgtg | ttacgttttag | cgtagatatt | tcgggcggtt | 480 |
| tgttagtaga | tgtaggggcg | aggaagcggg | tttttttttc | gtggtcgttg | ggcgggggaa | 540 |
| tcgttgggag | ttttgttttc | ggtttgcggc | ggtttttagac | gttgtatcgc | gtcgtttttac | 600 |
| gggtttcgaa | gagtttttag | aaatacgaat | gtttttgttc | gaggattata | ttttattttt | 660 |
| ttagagaagt | attttttttt | ttttttaata | tttatttttt | tttttttttt | ttttttttgt | 720 |
| atatattttg | tagggggggg | tagaagggac | gttggttttg | tttttttaat | cgggggtttc | 780 |
| gaaatagtgt | cgaagtattt | aggaatatag | attttaggga | tatgattttt | atttttgggt | 840 |
| atgcgaggtt | gttatttttt | aaaattattt | ttttttttat | tttttattta | agggatttat | 900 |
| ttttaaattg | tttgagggtta | ttttattttt | agataattta | ttttatattt | ttggatttta | 960 |
| aatataaggg | taggaggatt | aggattcgtt | ttgaagaagt | taaagttaga | gggtcgtatt | 1020 |
| ttggcgtgtt | atattttatag | aatgagttaa | attagagggg | agaaatagga | gtcggtagtt | 1080 |
| ttttgtgggt | tgtttgttcg | gggttttttg | tatgtaggtt | ggatggaggg | agaggggttg | 1140 |
| ggggtggcgg | gggatcgcgt | ttgaagttgg | gtcgggttag | ttgttgtttt | ttttaataac | 1200 |
| gagaggggaa | aaggagggag | ggagggagag | attgaaagga | ggaggggagg | atcgggaggg | 1260 |
| gaggaaaggg | gaggaggaat | tagagcgggg | agggcggggg | agagggagga | gagtttaattg | 1320 |
| tttagttagt | ttgcgttatc | gttttagagc | ggagaagagc | gagtagggga | gagcgagatt | 1380 |
| agttttaagg | ggaggatcgg | tgcgagttag | gtagtttcga | ggttttgttc | gtttattatt | 1440 |

| | | | | | | |
|-------------|------------|------------|------------|------------|------------|------|
| taatatttcgt | tttttttttg | ttttattttt | tttttttggt | tttatttttt | tttcgaaaat | 1500 |
| tttttatatta | gttaaaggaa | ggaggttagg | ggaacgtttt | tttttttttt | tttaaaaaat | 1560 |
| aaaaatagaa | aaattttttt | ttaggtcggg | gaaagtagga | gggagagggg | tcgtcggggt | 1620 |
| ggttatggag | | | | | | 1630 |

<210> 167

<211> 1630

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 167

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| ttttatgggt | agttcggcgg | tttttttttt | ttttgttttt | ttcggtttgg | aaaagggttt | 60 |
| ttttgttttt | gttttttgga | aggggagggg | agagcgtttt | tttgattttt | tttttttggt | 120 |
| taaatagggg | gttttcgggg | gagaggtgag | ggtagagaga | gaaggtggag | tagaaggggag | 180 |
| gcgaggattg | ggtggtgggc | gagtagagtt | tcggggttgt | tttattcgta | tcggtttttt | 240 |
| ttttaaaatt | ggtttcggtt | ttttttgttc | gttttttttc | gttttgaagc | ggtgacgtaa | 300 |
| ttgggtggg | tagttagttt | tttttttttt | tttcgcggtt | tttcggtttg | gttttttttt | 360 |
| tttttttttt | tttttttcgg | tttttttttt | tttttttaat | tttttttttt | tttttttttt | 420 |
| tttttttttc | gttattaagg | agaatagtag | ttggttcgat | ttaattttaa | acgcggtttt | 480 |
| tcgttatatt | ttattttttt | ttttttattt | agtttgtagt | ttagggggtt | cggataggta | 540 |
| atttataaaa | aattatcgat | ttttattttt | gttttttaat | tttatttttt | ttgtagggtg | 600 |
| agtacgttaa | aatacgattt | tttaattttg | gtttttttta | aacggatttt | aatttttttg | 660 |
| tttttgattt | taagatttag | gaatgtaggg | tagattattt | gaagatgggg | tgatttttaga | 720 |
| taatttagaa | ataggttttt | taagtgaaaa | ataaggaggg | gggtgatttt | agaaaatagt | 780 |
| aatttcgtat | atttagagat | aaagggttat | tttttgaagt | ttgtgttttt | gataatttcg | 840 |
| aagtgttttc | gaaagtttcg | attaaaggga | ttagaataac | gttttttttt | tttttttttt | 900 |
| tagagtgtgt | gtagaggaag | aagagggagg | gagaggtggg | tattaggaag | gaaggggggt | 960 |
| gttttttttg | agggatagaa | tgtgattttc | gagttagaat | tatcgtgttt | ttgggggttt | 1020 |
| ttcgggggtc | gtggggcgac | gcggtgtagc | gtttagggtc | gtcgtaggtc | gggggtaggg | 1080 |
| tttttagcgg | ttttttcggt | tagcggttac | gtaggaaaaa | ttcgtttttt | cgtttttgtg | 1140 |
| tttggtgata | agtcgttcga | ggtgtttgcg | ttgagcgtgg | ttatatcgat | gtagtttttt | 1200 |
| aggaaatggt | tcgggagggg | gagggggcga | gtgagggatt | aggttcgggt | tttttttcgt | 1260 |
| ttttttgcgt | aaatattatt | attttttttt | tttttcggag | gtatgagggt | tttacgttcg | 1320 |
| gttttttcgt | cgtatttttc | tcgatttttc | ggtttcgcgt | tttattttgt | taggtttttt | 1380 |
| ttttgggagt | cgattgcggt | gaagttcgtt | agtacggtcg | gttttgatac | gtgttttaac | 1440 |
| gtatttttga | gttaagggtt | tttttatagg | agatacgatt | tggtggcggt | tttttatatt | 1500 |
| tttttttcgt | ttatttttta | tttttatcgc | gttttttggt | gtattttatt | ttaggaggaa | 1560 |
| gggagagat | tagcgttttt | atgtgttgcg | taagttggta | cgtgtagcgg | gtatggcggtg | 1620 |
| gttcgagttt | | | | | | 1630 |

<210> 168

<211> 5976

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 168

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| agaggggtat | tttttatatt | aatttgaatt | ttatgattgt | attttttggt | aggagatgaa | 60 |
| agggataaga | ttgtttgaag | gattaatatt | tagtttttag | gtaggttagt | ggttaaaata | 120 |
| tttaggaagt | gaaagtttgt | tttttggtat | aaggaaaatt | ggagtttgtg | attttattat | 180 |
| gcggggtttg | ttatttgtaa | ggtgataggg | ttttttattt | atttgcggtg | atttgaaggg | 240 |
| taagggtttt | ggttaaata | tttttttttt | tagtgatggt | tgaaatttta | ttgttagcgt | 300 |
| tggatttttag | taagatttta | gagaaagttt | aattttttgga | gtttgggttt | tttttagttg | 360 |
| agatgttagg | aaagtaatgg | gttttattat | ttgtacggat | aggtttgtgt | atagtttttag | 420 |
| gggatttagg | gattttatta | gagtttattt | atagatatta | ggttaaaagt | tttggatagt | 480 |
| atttataatt | tttttgaaag | aagaaaagtt | ttttttttaga | gtttttttta | aagtgtaaat | 540 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ggttttggga | ggttcgaaat | gatgagttgg | tccggtatgaa | agaatTTTTT | ttagtagatg | 600 |
| taagagataa | tttgaggagt | tttagtggcg | gggggtgggg | aaggagagtt | tgggggaggg | 660 |
| gaggttttag | gtagtttata | atTTTTTTT | gaattggaaa | gggaatgtat | tgggttaaga | 720 |
| gggttaatta | tttatttttg | tagagtgttt | ataagaattt | tatgaattaa | gtgttattaa | 780 |
| tatttttatt | ttatagattga | ggaaattaa | atgggtggaga | taaaatgatt | tatgtttttt | 840 |
| aattaatggt | agagttagaa | gtgaatttag | gttggagtga | agtggtttta | gtgtttaaat | 900 |
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| ttttttatgg | tagaggatag | atttttattt | tttgggtggt | ttgggtattg | gtttgtttgg | 5880 |
| aggttaaaga | ttaatttttt | aggtagtttt | gtttttttta | ttttttggta | aggggtgtag | 5940 |
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<210> 170

<211> 3486

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 170

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| aggaagtttt | gatttgaaaa | ttagtttttg | gtattgtttt | ttttattggt | ttttgggtat | 120 |
| taatttttgt | tttttaattt | tagttgaatt | agtggatggt | gatattatag | gtttaagata | 180 |
| gttgatttta | aatatttagt | attatagggt | atattaagga | aatatttgta | ggtaatttag | 240 |
| ggtttgggaa | ggagttattt | ttagttattt | gtaagatagt | aggatttgta | gattatagta | 300 |
| taattaaatt | tagataaaat | tttgaattag | tgagaattat | taggaaggaa | aggaatagaa | 360 |
| aatgaattaa | tttgagtgtt | aggagatttg | tatttagttt | tgatttcggt | attaatcgaa | 420 |
| tgtatgtttt | tggataggaa | atttttttga | gtttcgattt | ttttcgtggt | aaaaaggaga | 480 |
| gggttaaatt | atagggtttc | gagggttttt | tttagttggt | atattttgga | gcgtatgaga | 540 |
| tgaggtagggt | atataaagt | gataagatgt | ggttaagaaa | ataagttata | tattaagttt | 600 |
| attttagtag | taggtgttta | agaaaaattt | gttgttgtgt | aatattagaa | cgggaagggt | 660 |
| gttttttagta | aaatgtatta | attttgggtt | aaattaagat | gatgggtatc | gggtatgggg | 720 |
| gtggggaggt | agttgaagat | ttattgagtt | ttgttttagg | gtagttttgt | ttatcgtttt | 780 |
| attttatttt | ttattacggt | gtttaagttt | atattgagag | agaaattttt | agttgtaaaa | 840 |
| gggagaagag | aaacgttgga | atattagtat | cggacgttag | gatatgggtg | tggtgtttta | 900 |
| aaaattattt | tattattttg | agtttgattt | cgaagggagt | attttttatt | tttagttttt | 960 |
| gaaagtatt | tatttagtatt | tgaatattgt | tttgagtttg | ttggagtagt | gaaatttggt | 1020 |
| agagagaag | ggtggaggaa | ggaaggagtt | gttgattttg | gcggttggtt | ttaggttagg | 1080 |
| gaaattgtta | taatttcggg | aaagaataga | aaagttagaa | gggacgagtt | tttatacgta | 1140 |
| gttaatgttt | atgggtttta | ttgtgttttg | gaagggaagt | tttgggttag | gggtgtattt | 1200 |
| tcgtttttta | aaattaaacg | tgtttgagat | agttataaag | tttattaagg | gatttgagag | 1260 |
| attagagttt | tttggttttt | ttttttaatt | ttgagttttt | tttttatttt | tattgaggga | 1320 |
| gagtttgagt | ttatgataag | tgtcgcgttt | atttttggtt | aattttttaa | agaaagacgt | 1380 |
| tcgttttggt | ttttttttta | ggttttttagt | tttttttagg | atggtagaaa | tttttgggtt | 1440 |
| aaggttgagc | gaattattgt | ttattgtttt | tattagtttt | tagtaaagggt | acgtcggcgg | 1500 |
| gggggcgttt | agttttttta | gtaaacgttt | cgcggttttt | ttcgtagatt | acgaggtggg | 1560 |
| ggtcgtttgg | gagggtcgag | ttgggggttag | ttcgttattt | cgggtttttag | cgaattgtcg | 1620 |
| gcgattttcg | cgtttttttg | gttttaggtt | cgtttttttc | ggcgaggagc | gggagggagg | 1680 |
| tcgggggtta | ggcgtcgcgg | cgaattcgtt | aacgtagcgt | cgggttttca | atttttaggt | 1740 |
| tcgttttagg | ttttcgttcg | tttggttagt | ttgtttgttt | taattttaat | tttttcgagg | 1800 |
| ttagtttagag | taggtttgtt | ggtagtagta | tttttttagt | agttacgcga | ttagttaatt | 1860 |
| tttcggcggc | gttcggggag | gcggcgcgtt | cgggaacgag | gggaggtggc | ggaatcgcgt | 1920 |
| cggggttatt | ttaaggtcgc | gttcgttagt | ttcggcgggg | cgggttttcgt | cgtcgttaatt | 1980 |
| aatggatttt | tttttttggt | taaatagatt | cgtcgtgtta | attatttttt | ttttcgttag | 2040 |
| tttttttttt | atcgttatat | tgggttaatta | aaaaaagggg | gttcgttttt | tcgggggtgtt | 2100 |
| tttttttttt | tttttttggt | tcgtttgttt | acggtttttc | gatttcgacg | tcggtaagggt | 2160 |
| ttggagagcg | gttgggttcg | cgggattcgc | gggtttgtat | tcgttttagat | tcggacgggt | 2220 |
| tttgttattt | ttttcgtttg | tttggttttt | tttttttttc | gttttttcgt | tcgttagttt | 2280 |
| atttgatttag | cggagattcg | gcggtcgggt | cgggggtttt | tcgtagtttt | tgccgcgtttt | 2340 |

| | | | | | | |
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| tagagttcgg | gtcgtggttc | gtcgggggttt | gtgtttttttg | gtttcgaggg | tagtcgttgg | 2400 |
| gttttcgaga | gggggttcggg | ttgcgtaggg | gcgtttttgtt | ttgttcgggtt | ttgtttttttt | 2460 |
| gagagtgcga | gagaggcggg | cgtgtagatt | cgggagaaaag | atgttaaaccg | tcgagtggtt | 2520 |
| taacgggag | tttagtttgg | agcggatgga | cgtaggttag | gcggagtatt | tttagttttc | 2580 |
| ggtttgtagg | aatttttttcg | gttcgggtgga | ttacgaagag | tttaattcggg | atttggagaa | 2640 |
| gtattgtaga | gatatggaag | aggcgagtta | gcgtaagtgg | aatttcgatt | tttagaatta | 2700 |
| taaattttta | gagggttaagt | acgagtggtta | agaggtggag | aagggtagtt | tgttcgagtt | 2760 |
| ttattataga | ttttcgcggg | tttttaaagg | tggtttgtaag | gtgtcggcgt | aggagagtta | 2820 |
| ggatgttagc | gggagtcggt | cggcggcggt | tttaattggg | gtttcgggta | attttgagga | 2880 |
| tacgtatttg | gtggatttaa | agattgattc | gtcggatagt | tagacggggg | tagcggagta | 2940 |
| atgcgttaga | ataaggaagc | gatttgtaat | cgacggtaat | gattttttttt | taattataga | 3000 |
| atgtgtttgg | ggttttcgttt | tggtttgttgg | aggggtgttaa | tttttagtttg | tttttcggcg | 3060 |
| tatttttgatt | tagttttggg | agagttaatt | ttattggttt | taggtgttta | gtgttatttg | 3120 |
| gtttattgtt | tggtttgtttg | tgatttttaa | gttagaaatt | ggagatggta | agattcgata | 3180 |
| atttttttaa | tttaatatat | cgcgggttttt | tttattagta | atttttaggt | atgtgataaa | 3240 |
| gttgggatgt | ttattaacgg | ttcgtttttt | ggtagaggaa | agagttttgg | ggcggagaat | 3300 |
| gtattttttg | ttttttgaaa | ataattttat | tttgtgtttt | taaaagtatt | tggggatgac | 3360 |
| ggatttagga | ttgtgggtgg | aggtagtggg | ttttttattt | tttgattatg | gggttaattt | 3420 |
| ttgttagtta | ttgttttttt | taataaagat | tggtgtgttt | ttttaaaaat | tttttttgcg | 3480 |
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<210> 171

<211> 3486

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 171

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| tggtagaagt | tggttttata | gttaggggat | gaaaaattta | ttatttttat | ttataatttt | 120 |
| ggattcgtta | tttttagtgg | tttttaaggg | tataaaatga | ggttggtttt | aaaaaataga | 180 |
| aagtgtattt | ttcgttttag | agtttttttt | ttagttagga | ggcggatcgt | tgataaatat | 240 |
| tttaattttg | ttatatattt | aggagttggt | agttagaggg | atcgcgatgt | attaagttag | 300 |
| ggaaattatc | ggattttatt | atttttagtt | tttgatttaa | aagttataaa | tagataagta | 360 |
| tggggttagg | tagtattgaa | tatttaagat | taataaagtt | agttttttta | aagttaaatt | 420 |
| agaatacgtc | gaaaagtaag | ttaagggttaa | tatttttttag | taggttaaagc | gggggttttaa | 480 |
| atatatttta | tggttgggaa | agggttatta | tcgtcgggtg | taggtcgttt | ttttattttt | 540 |
| cgtattgtt | tcgttaattt | cgtttggttg | ttcgacggat | tagtttttgg | gtttattaaa | 600 |
| gcgtgtttt | tagagttagt | cggagtttta | attaaaggcg | tcgtcgggcg | gttttcggtg | 660 |
| atatttttgt | ttttttgcgt | cgggtattttg | taggtattttt | tggggggtcg | cggggggttg | 720 |
| tagtagaatt | cgggttaagtt | gttttttttt | attttttgtt | attcgtattt | gttttttagg | 780 |
| ggtttgtgat | tttgaaaatc | gaaattttat | ttgcgttggt | tcgttttttt | tatgtttttg | 840 |
| tagtggtttt | tttagtttcg | ggttaatttt | tcgtgggtta | tcgggtcgaa | gagggttttg | 900 |
| taggtcgagg | gtttgggggtg | tttcgtttgt | ttggcggtta | ttcgttttag | gttaggggtt | 960 |
| tcgttagata | ttcgtacgtt | tgatattttt | ttttcgggtt | tgtacgatcg | tttttttcgt | 1020 |
| atttttaaaa | aaataaaatc | gaataaaaata | aagcgttttt | acgtagttcg | aatttttttc | 1080 |
| ggaagttagg | cgattgtttt | cggagttaaa | agatatagat | ttcgacgagt | tacgggtcga | 1140 |
| gttttaggag | cgcgtagggg | ttgcggggaa | gtttcgggtc | ggtcgtcgag | ttttcgttga | 1200 |
| ttaaatggat | tggcgagcgg | gagggcggag | aggagagggg | attaggttaag | cggagagggg | 1260 |
| ggtaaagtcc | gttcgagttt | gggcgggtgt | aagttcgcgg | gtttcgcgaa | tttagtcgtt | 1320 |
| ttttaaat | tgtcggcgtc | ggagtcgtag | agtcgtgagt | aagcggggat | aggggagggg | 1380 |
| gagaaaaata | tttcgaaaag | acgagttttt | tttttttagt | ggtttaatat | ggcgggtggaa | 1440 |
| gggaggttga | cgaagaagaa | aatgattgat | acggcgagtt | tatttaataa | gaggaggaga | 1500 |
| tttattggtt | gcggcgggcg | gagtcgtttc | gtcgaggttg | gcgagcgcgg | ttttaaggtg | 1560 |
| gtttcggcgc | ggttttcgtta | tttttttcgt | ttttcgagcg | cgtcgttttt | tcgagcgtcg | 1620 |
| tcgggagatt | ggttggtcgc | gtgattgttg | gaggggtatt | gttggttaata | aatttggttt | 1680 |
| ggttggtttc | ggagaaatta | aaattaagat | gttaaaccgt | cggaattttg | | 1740 |
| gggcgggggt | tgaggttcgg | ggttcggcgt | tgcttggtcg | ggttcgtcgc | ggcgtttaag | 1800 |
| tttcgatttt | tttttcgttt | ttcgttcggg | aagtcgggat | ttggattaga | ggatcgcgaa | 1860 |
| ggtcgtcggg | agttcgttag | gagtcggggg | ggcgagttgt | tttagtttcg | gtttttttta | 1920 |

| | | | | | | |
|-------------|------------|------------|-------------|-------------|-------------|------|
| gcgggttttta | tttcgtggtt | tgcgggggag | gtcgcgggagc | gtttgttggg | ggggttgggc | 1980 |
| gttttttcgt | cggcgtggtt | ttgttggggg | ttggtggagg | tagtgggtaa | tggttcgttt | 2040 |
| agttttaatt | tagaagtttt | tgttattttt | ggggaggttg | ggggtttagg | gaagaagtta | 2100 |
| aagcgaacgt | ttttttttta | gaaattagtt | aggagtagac | gcggtattta | ttatgaattt | 2160 |
| aagttttttt | ttaatgaaaa | taagaaagga | atttaagatt | aaaaaaaaaa | aataaaaaat | 2220 |
| tttagttttt | taagtttttt | aataaatttt | gtagttgttt | tagatacgtt | tagttttgaa | 2280 |
| aaacgagggg | atattttttg | tttaggattt | ttttttttta | gtatagttaa | ggttatggat | 2340 |
| attggttgcg | tgtgggaatt | cgtttttttt | tatttttttg | tttttttttc | ggattgtagt | 2400 |
| agtttttttt | atttgagttt | agtcgttaaa | tataatagtt | tttttttttt | tttatttttt | 2460 |
| ttttttatta | gattttattg | ttttaataaa | tttagaataa | tatttagatg | ttagtgaatg | 2520 |
| tttttagagg | gttgaagggt | gaaaatattt | ttttcggggg | taaatttttag | atgatgaaat | 2580 |
| gatttttaaa | atattataat | tatgttttaa | cgttcgatat | tagtatttta | gcgttttttt | 2640 |
| tttttttttt | gtagttggaa | attttttttt | tagtgtgggt | ttgagtatcg | tggtggaagg | 2700 |
| taaagtagga | cgatgagtag | ggttgttttg | agataaagtt | tagtggattt | ttaattgttt | 2760 |
| ttttattttt | atgttcggta | tttattattt | tggtttgagt | taaagttaat | gtattttatt | 2820 |
| ggaaattaat | ttttcgtttt | aataattata | agtagtaaag | tttttttaag | tatttatgtt | 2880 |
| atagatgagt | ttgatgtgta | gtttgttttt | ttagttatat | tttgtttatt | ttgtgtgttt | 2940 |
| attttatttt | atacgtttta | gaatgtgata | gttgggaagg | attttcggga | ttttgtgggt | 3000 |
| taattttttt | ttttttatta | cggaggaaat | cgagatttag | agaggttttt | tgtttaggga | 3060 |
| tatgtattcg | gttggtatcg | gagttaggat | tagatgtaag | ttttttaata | tttaggttgg | 3120 |
| ttattttttt | gttttttttt | tttttaatgg | tttttattgg | tttagggttt | tgtttgagtt | 3180 |
| gattgtgttt | gtagtttgta | ggttttgttg | ttttataagt | gattgaaaat | gggttttttt | 3240 |
| laggtttttg | gttgtttgta | gatgtttttt | tgatgtgggt | tgtggttatt | gatatttaaa | 3300 |
| tgtagtgtgt | ttgagtttgt | ggtattatta | tttattagtt | taattaaaaat | tgaaggatag | 3360 |
| gggttgatat | ttagagaata | gtaaaggggg | tagtgttttag | aattagtttt | taagtttagga | 3420 |
| ttttttattt | aattgataga | aaagaattta | tttaggatta | agtaagaggt | tttatttttt | 3480 |
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<210> 172

<211> 8666

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens).

<400> 172

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| tatttttagt | tgggtttttt | agtttggttt | taaagaataa | aataaaaagg | ttttttgttt | 120 |
| agtttttatt | taattttatt | tttttattta | taagaggtat | tttaaatatt | tacgattttt | 180 |
| aattttttta | atcgattatt | ttatttttat | tttgtaaata | agttaatttt | tttattttata | 240 |
| gaaggaagtg | ttttaatttt | tttttcgttt | tgattttttt | ttttttttta | atttatgtat | 300 |
| tttttgtgat | aaaattttata | attatcgttg | tattttgagt | tttatttttt | tattattttt | 360 |
| gagggatttt | aagtttttta | aaatattttt | ttttgtttgt | gtattttaatt | ttttttttat | 420 |
| ttttttttta | tttttttttt | tttttatttg | gtatttggtt | tttttaggtat | atgtgtgttt | 480 |
| aggttttttt | tattttttat | ttgttttttt | ttatgggtata | gggttttgaa | ttattataat | 540 |
| taagtttatga | aagagtagtt | aacgtagtgt | ttttattttt | ttgtttattt | attatttttag | 600 |
| tttttttttt | ggttttttga | ggagtttttt | ataggttggt | tttttaggaat | aagtttaaat | 660 |
| gaattatttt | tagttttttt | aaattttttat | gtttttgtat | atttttttat | ttttgtttag | 720 |
| aatatttttt | tttttttttt | ttattttttta | attttttatat | tattttttta | gattgggatt | 780 |
| agtttttagt | attcggaagt | ttttgttttt | tagagataaa | tgagaatgag | tttgggtatt | 840 |
| tttttatttt | tttgtattat | ttttgttttt | attttgtttt | tttaagagta | ttatatgttt | 900 |
| tatttaattt | ttaaataatt | gtttgaggta | agtatagtta | ttattttaat | tatgtaaatg | 960 |
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| gaatagttga | ggtttgaatt | ttggtagttt | gattgtagag | atattatgtt | tgattttatt | 1080 |
| ttttttgttt | ttatttttat | tttgttttta | gtttttgagt | ttgttgaatg | aatgaatagg | 1140 |
| tggtagtttt | tttttgttat | aagattgatt | agaattaaga | taggttttaa | ttttacgtgt | 1200 |
| agaattttta | aaattgtaaa | ggtagtgtaa | atttaaaaaa | agaatgggat | ttttaggaaa | 1260 |
| gaggaaaagt | aagtgtgaga | ataataataa | taataattta | ttaatttttag | ttaatttttag | 1320 |
| aatgttagta | aattttttata | ttaaaagttt | ttggatataat | attattatat | tttatgggta | 1380 |
| tatgaaatat | attataattt | ttttttgtat | ataggaaaat | tgagattggg | ataaggagta | 1440 |
| tagagattta | ggatttttata | tttttatttt | tttaggattt | tgtatttttg | gtcgtatgtg | 1500 |

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| atagagtaaat | tgggagata | atggggtttt | taatagaaaa | attaggaaa | ttttttttatt | 1560 |
| attattaatt | ttttatataa | tatttttttt | atttttattt | tattttattt | tttaagtttta | 1620 |
| gagtatatgt | gtataatgtg | taggtttgtt | atatatgtat | atagtgttat | tggttggtgtg | 1680 |
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| ttttttttat | ataagattta | taatggataa | tggattttta | tttttagagt | aaaattggtt | 1800 |
| tattttaagga | tggtataaatt | tttttagagt | tttattgtaa | gatatgagat | atatataattt | 1860 |
| aaaatttggt | tttggtattt | ttaaagtagt | taatttttat | atttggttat | aatgtatttta | 1920 |
| aatggttggt | ttatatgggt | gtatttttta | ttttttttat | taatagttat | atatatttttt | 1980 |
| tataaaggtt | gaagaggtt | ttgatgtagg | aatttatggt | agagtttttag | agaaatttttt | 2040 |
| gaattttattg | aaagttttat | ttagaataat | atgtgtaagt | gaatatattt | tttttaaaaa | 2100 |
| aaattatttat | ttattttttt | ttttgagaag | aaggtaattt | ttttaataga | tttttgaagg | 2160 |
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| ttatgtttgt | aatttttagta | ttttgggagg | ttaaaggtggg | tggattattt | gagggttagga | 2280 |
| gttcgagata | agtttagtta | atatagttaa | atttcgtttt | tattataaat | ataaaaaatta | 2340 |
| gttgggtatg | gtagtatgtg | tttgtaattt | tagttattcg | ggaggttgag | gtaggagaat | 2400 |
| tgttcgaatt | cgggagggcg | agggtgtagt | gaatcgagag | agatcgtgog | gtgttattttt | 2460 |
| attttagttt | gggtaataga | gcgaaatttt | attttaaaaa | aatatataaa | ataaataaat | 2520 |
| aaaaagaaag | aattattgta | ttagtgatgg | aaatgtgttt | tttttttttt | attttggttaa | 2580 |
| ttattttttt | ttttttttat | tataaaaata | tttaaattaa | attaaaaata | ttttatttat | 2640 |
| cgatagtttg | aatttttttt | attattgtta | tatagttaat | tgagaggtat | ttcaggagaaa | 2700 |
| tataaatgg | tatagtaaatg | tattgtagat | tttaataata | tatttgatat | tttaaatgtt | 2760 |
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| agatatattg | ggtttataag | gtttaagtta | attagggatt | gaaatataat | ttttaaatag | 2880 |
| agttggatta | tttagtaggt | agattaagta | tgtgttttaag | gtatttagtaa | agttttagta | 2940 |
| atttattttt | taaaacgtag | tatatgtttt | tgataagttt | aaaaagtagt | agttatagga | 3000 |
| aaaattagaa | tttttatttt | tttgcgtttg | ttatattttt | tagtggttgtt | taattttttt | 3060 |
| ttgtaagtga | gggtgggtgga | gggtgtttat | aatttttttt | gggagtaagt | tttttttggt | 3120 |
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| aaaaagaaa | aaagaaagaa | agaaagatta | agaagaattt | attttttgaa | aagattatgg | 5580 |
| gtatttttta | ttatttttat | ttataaagaa | aagttaaata | gtattaaaga | gtataataag | 5640 |
| cgtaaggagg | taaaagtttt | aatttttttt | gtgattatta | ttttttaagt | ttattaaaaa | 5700 |
| tatgtattac | gttttaaaaa | atggattgtt | tagattttgt | tgatgtttta | agtatatgtt | 5760 |
| taatttggtt | attggataat | ttagttttgt | ttaaaagtta | tattttaatt | tttggttgat | 5820 |
| ttaaattttg | tagatttagt | atattttgta | tttttagtgt | ttgtttgatt | ttaaaatatg | 5880 |
| agttttttta | aatgaagtta | atgaaaataa | tttgggatgt | taagtatgtt | attaaaattt | 5940 |
| taatgtatt | attgtattat | ttatattttt | ttcggggtat | tttttaatta | gttggtgtagt | 6000 |
| aatgatagg | aaaatttaaa | ttatcgataa | ataaaattat | tttagtttag | tttaagatat | 6060 |
| tttatgatgg | aggaggaaga | aagtgttgt | taggatggga | gggagggaat | atatttttat | 6120 |
| ttattaata | atggtttttt | ttttttgttt | gttggttttg | tggttttttt | tgagatggag | 6180 |
| tttcgttttg | ttgttttaggt | tggagtga | tggtatcgta | cgattttttt | cggtttattg | 6240 |
| taattttcgt | ttttcgggtt | cgagtaattt | ttttgtttta | gttttttcgag | tagttgggat | 6300 |
| tataggtata | tggtgttata | tttagttaat | ttttgtatta | ttagtagaga | cggggtttta | 6360 |
| ttatgttggt | taggtttgtt | tcgaattttt | gatttttaggt | gattttattta | tttttagttt | 6420 |
| ttaaagtgtt | gggattatag | gtatgagtta | tcgtgttcgg | tttatagtgg | tttttaatgg | 6480 |
| gggtgggaga | gtgggaagag | taggtttttt | taagagtgtg | ttgaaataaa | tatttttttt | 6540 |
| ttaaaaaaga | aagtaggtaa | tgattttttt | taaaaaagat | gtgtttattt | gtatatgtat | 6600 |
| ttttagataa | aattttttagt | gaattttagg | atttttttga | aatttttatta | tggattttta | 6660 |
| tattagaagt | tttttttagt | tttgtagaaa | atatatatag | ttattgggtga | agaagatggg | 6720 |
| agatgtaatt | atataaaaa | aatattttga | tgtattataa | ataggtgtaa | aagttgattg | 6780 |
| ttttggaaat | attaagaata | agtttttagat | atgtatatatt | tatattttgt | agtagagttt | 6840 |
| tgggaaggatt | atggtatttt | tgggtggggg | tattttgttt | tagaaattga | agtttattat | 6900 |
| ttattataaa | ttttatgtag | gggggagggg | ggagggatag | tattaggaga | tatatttaat | 6960 |
| gttaaattgat | gagttgatgg | gtgtagtata | ttaatatggt | atatgtatat | atatgtaata | 7020 |
| aatttgtata | ttgtgtatat | gtatttttaa | atttaaagta | taaataataa | taaaattaaa | 7080 |
| aaaatattat | gtaaataatt | aataatagt | ggaaaatttt | tttagttttt | ttgttaaaga | 7140 |
| gtttattata | tttttagttt | atttatatat | atcgatttga | ggtgtaaaat | tttagaagaa | 7200 |
| tgaaaatata | aagttttgga | tttttgtgtt | ttttatgtta | gttttagatt | ttttatgtgt | 7260 |

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|-------------|------|
| aaaatgggat | tataatatat | tttatgtggt | tataaaatat | gataatgtat | gtttaaaagt | 7320 |
| ttttaatgta | aaaatttatt | atatttatta | aatttattaa | agtttggttg | ttattgttat | 7380 |
| tattattttt | atatttattt | tttttttttt | ttgagaatgt | tatttttttt | ttagatttgt | 7440 |
| attgtttttg | tagttttgaa | aattttatac | gtgaaattta | aatttgtttt | aattttgatt | 7500 |
| agttttataa | taaaaaaaga | ttattatttg | tttatttatt | taataagttt | agaaattaag | 7560 |
| ggtagatatg | gggtgggggt | agaggggagt | aggttaaata | tagtattttt | atagttagat | 7620 |
| tgtaggggtt | taaattttta | ttgttttatt | tattggtttt | tttaattttta | ttaaagttaa | 7680 |
| ttaatatggt | tgggtttttg | tttttttatt | tgtatgatta | ggataataat | tgtatttgtt | 7740 |
| ttaaatagtt | gtttagggat | taaatgaagt | atgtaatggt | tttagaagag | taaaataaag | 7800 |
| tatagaatga | tataagaaaa | tgaaaagggt | attaaattta | tttttatttg | tttttagtag | 7860 |
| gtaaagggtt | tcggatggtg | agagttgatt | ttagttttga | agaatgatgt | gagagttaa | 7920 |
| agatggaaaa | gaaggagaaa | gatatttttag | gtagaggtaa | gaggatgtgt | aaaggatatag | 7980 |
| aagtttagga | aaattgaaag | taatttattt | agatttattt | ttgaaaatta | gtttgtgaag | 8040 |
| gatttttttag | agagttaaaa | gaaaaattag | gataatggga | tggttaaggaa | gtggggatat | 8100 |
| tgcggttgatt | atttttttat | agtttggttg | tgatagttta | aggttttatg | ttatgaagtg | 8160 |
| aggtagatgg | aagggtggagg | agatttgagt | atatatatat | ttggaagggt | aagtgttaag | 8220 |
| tgaagagaag | ggaaagttag | aaaagaataa | aagaaaagtt | aagtatatag | gtaagatagg | 8280 |
| atatttttga | ggatttgagg | ttttttaaaa | ataatgaaga | aatagaattt | aaagtatagc | 8340 |
| ggtggttata | gattttgtta | taagagatat | atagatttgg | gagggagaaa | aggttagaac | 8400 |
| ggggaggaag | ttgaggtatt | tttttttatg | aatgaggagg | ttagtttggt | tgtagagtga | 8460 |
| aataagatg | gtcgggttagg | aagtttgaga | atcgtaaagg | tttggaatat | tttttatgag | 8520 |
| agagaggat | gggttgagta | agatttagat | agagaagttt | tttgttttgt | tttttaaaat | 8580 |
| tagattggag | aatttagttg | agggtggaga | ttatgatata | gtagggatat | ttgattattt | 8640 |
| tttttaaaat | aaagaaagtt | ttgtag | | | | 8666 |

<210> 174

<211> 2501

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 174

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| gaaaattagg | ttgagtaggt | tggtttttta | aagaaattta | ttgagttttt | ataatgtttt | 60 |
| ttttatttga | cgggagaaaa | ggggtttttg | aagattaagt | gtgaagtttt | agaattttgt | 120 |
| ttggagttgg | ttaggattat | ttaggtttga | gtataagtaa | agcgttggtc | gtgggtgttag | 180 |
| taagcgcgaa | tgttttcggt | aacgtttttt | ttattttaaag | ttgtttttta | tttagttaat | 240 |
| ttgttttcgc | aaagtttatat | atttgtttcg | tgtaagattt | ttagttattt | tatttagtta | 300 |
| ttgttttttt | ttttattatt | attttttatg | ttttttttta | agaaaatat | tattttttat | 360 |
| ttttttatta | atttttaaata | gttttttatt | ttttgatata | tttattattt | aagaaaattg | 420 |
| tttaagaatt | gggttagatt | attttgtttt | aatttttttg | ataagtttta | gagaaaattta | 480 |
| aaggttaaaa | taagagtata | agagtaaaag | gtagagaaat | taagaaattg | aagattagga | 540 |
| aatggggggt | ggatgggaaa | gaaaaagaaa | ttgttattaa | tgttattcgg | tttttttttt | 600 |
| tgtttaggtg | gatttttagt | ttgttgaggt | tttgtttagta | gatttttagt | tttaattagt | 660 |
| atttttatgg | tggtggtatt | tttattgttt | ttaaaagaaa | gagttttttt | taattttata | 720 |
| gggatttggt | ggatgaggag | ttagagttaa | ggtattttta | aaaaaatatg | tgaagatttt | 780 |
| tattttgtaa | tatataagta | attgtttttt | tgtaagattt | ttgttttttt | tagtatttcg | 840 |
| aattaaaaatg | attttgtaaa | taaaaattgt | ttatttttag | gagaggttta | tttatgtagt | 900 |
| tttttattaa | agtttttagg | taataaattt | ataatttgcg | gttttttttt | tatttaattgt | 960 |
| agtattcgtt | gaaatgtttt | aaatatttta | agtaataaat | gttgatttaa | atttatttag | 1020 |
| gaagattagg | aaggggaaaa | aaagtatttg | gtattttaa | ttttagaaga | gaatttaattg | 1080 |
| atagggttag | tttgtttaaat | gataagttta | gtattatatt | ttttttttat | gatgttttat | 1140 |
| tattattgta | taaatttttt | ttattattta | tgataaataa | aaataagata | tttgataaag | 1200 |
| tgggtttaaa | taggtaagag | tgtaaataaa | gatttattgt | ataaatatga | tgaattggg | 1260 |
| attttagatt | tttaaagtat | aatttttttt | tgttttatgt | gtggttaggt | gttattttta | 1320 |
| attttcgaatt | agtttttttt | ttttttaaag | gttgatttta | taatgtaaaa | atggaaagaa | 1380 |
| ttaaaaagta | tacgtaaaaat | atgatttttcg | ggattttttt | ttatttttat | ggttgattaa | 1440 |
| tttaaataga | aagatatatt | taagagaaaa | ttgttaagtt | tgatataagt | tatgaaattt | 1500 |
| gtgaagttaa | agtattgttt | ggggatgaat | tttaatttgta | tgataggtgt | agagttgtcg | 1560 |
| tttttagata | ttttaagaaa | tacggagtta | ttttgaatga | tttttttttcg | gttataaggg | 1620 |
| agttattaac | gttttttatag | tgaatttaaat | tggttggttg | aaggaataga | aattttttgt | 1680 |

| | | | | | | |
|-------------|-------------|------------|-------------|------------|-------------|------|
| ttcgtttatt | ggggattagg | agttgaggg | agtggggaat | atttttaaaa | tattagtttt | 1740 |
| gggttttatt | gatatattagc | gagtagtgta | gttagtatatt | ttggcggttt | tttgggttag | 1800 |
| tttttggcgt | atgcgtttta | gtatttttgg | gtagggtttt | tcgttttcgt | gacgcgtcgg | 1860 |
| ttcgggtttg | gtttttcggc | gattatagcg | gatagggggc | ggagtttaag | ggggtgggga | 1920 |
| gacgtcgggt | ttttggttta | gttgaaaacg | gaattttttg | tcggttgggt | ttttattttg | 1980 |
| ttagagcgag | gcggggtagt | gaggatttcg | cgacgcgttc | gtattttgcg | gttagagcgg | 2040 |
| ttttgagttc | ggttgcggtc | gcgttaggcg | ttttttttta | gaagtaattt | aggcgcgttc | 2100 |
| gttggttttt | gagcgttagg | aaaagttcgg | agttaacgat | cggtcgttcg | gttattgtac | 2160 |
| ggggttttaa | gtcgtagaag | gacgacggga | gggtaatgaa | gttgagttaa | ggtttttttag | 2220 |
| gaaggagaga | gtgcgtcgga | gtagcgtggg | aaagaaggga | agagtgtcgt | taagtttacg | 2280 |
| gttaacgggtg | gattattcgg | gtcgttgccg | gtttgggggt | tgcggaatgc | gcgaggagaa | 2340 |
| taagggtatg | tttagtgggg | gcggtagcga | tgagggtttg | gttagcgtcg | cggcgcgggg | 2400 |
| attagtgagg | aagggtcgat | agtttttggg | agtcggcgcg | gattttaacg | gagttaatcg | 2460 |
| tttcggggagg | cgcgcgattt | aggtagttgg | ggtttttaggg | t | | 2501 |

<210> 175

<211> 2501

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 175

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| gttttgggg | tttagttatt | tggatcgccg | gtttttcgaa | acggttgatt | tcgttgggat | 60 |
| tcgcgtcgg | ttttaggagt | tgtcgtattt | tttttattag | ttttcgcgtc | gcggcggttg | 120 |
| ttagattttt | atcgttgtcg | tttttattgg | gtatgttttt | gttttttttcg | cgtatttcgt | 180 |
| agtttttaga | cgcgtagcgg | ttcggataat | ttatcgttgg | tcgtaaattt | aacgatattt | 240 |
| tttttttttt | ttttacgttg | tttcggcgta | tttttttttt | tttaggagat | ttgggttttag | 300 |
| ttttattatt | ttttcgtcgt | ttttttgccc | tttgggggtt | cgtgtagtgg | tcgagcggtc | 360 |
| ggtcgttagt | ttcgggtttt | ttttggcggt | taagaattag | cgggcgcgtt | tggattgttt | 420 |
| ttgggaaaaa | gcgttttagcg | cggacgtagt | cgagtttaaa | gtcgttttgg | tcgtagggtg | 480 |
| cggacgcgtc | gcggagtttt | tattgttttcg | tttcgttttg | gtagagtggg | gagtttagtcg | 540 |
| gtaaagaatt | tcgttttttag | ttgggttaag | gggtcggcgt | ttttttattt | tttttaggttt | 600 |
| cgttttttgt | tcgtttgtgat | cgtcgggagg | ttaggttcgg | gtcgcgcgt | tacgaggggc | 660 |
| gggaagtttg | tttaaagatg | ttaggacgta | tgcggttagag | attgggttag | ggagtcggtta | 720 |
| ggaatgttgg | ttgtattgtt | cgttggatgt | ttagtaaaat | taagggttaat | attttgggaa | 780 |
| tgttttattat | tgttttttagt | ttttaatttt | tagtaggcgg | agtagaggat | ttttgttttt | 840 |
| ttagtttagtt | agttgggttt | attgtggaga | cgttgggtgg | ttttttgtga | tcgagagaaa | 900 |
| ttattttaaa | ataatttcgt | gttttttaag | atgtttgaaa | gcgatagtgt | tgtatttggt | 960 |
| tataagtta | aattttattt | taggttagtat | ttgggtttta | taagttttat | aatttgtatt | 1020 |
| aaattttagta | attttttttt | ggatgtgttt | ttttgtttga | attagttaat | tataaaaaata | 1080 |
| gagaaaaaatt | tcgagaatta | tgtttttcgt | gtgtttttta | atttttttta | tttttgtatt | 1140 |
| atggatataa | tttttaaaag | agaaaaaaat | tagttcgaga | ttgagagtgg | taatttggtta | 1200 |
| tataaagat | aaaaaaaaat | tatatattta | gaatttgaga | tttagttttt | attatatttg | 1260 |
| tatagtaaat | ttttgtttgt | attttttatt | atttaaat | attttgttag | gtattttatt | 1320 |
| tttattttatt | atgagtaata | aaggaaattt | atgtagtaat | aatgaaatat | tataagagag | 1380 |
| gggtgtgggt | ttgggtttgt | tattaaatag | gttgaatttg | ttattaaatt | tttttttgaa | 1440 |
| gatttaaatg | ttaaagtgtt | tttttttttt | ttttaatttt | tttaggtgag | tttgaattta | 1500 |
| tatttattat | ttaaaataat | taaaatattt | tagcggatgt | tattattggat | aggaagagaa | 1560 |
| tcgtaaagtt | tggaatttgt | gttttaaaat | tttggtgagg | aattgtataa | gtggattttt | 1620 |
| tttaaaagtg | aatagttttt | gttttatgaa | ttatttttgt | tcggagtgtt | gaggaagata | 1680 |
| aagttttaat | aggagggtaa | ttgttttgtg | attgtaaaat | gagagttttt | atatgttttt | 1740 |
| tttaggatat | tttagttttg | attttttatt | ttttaaat | ttgtagaatt | aaaaaaagtt | 1800 |
| ttttttttta | aaggtagtgg | aagtgttatt | attatggaag | tgttgggttag | gggtgaaaat | 1860 |
| ttattgatag | agttttaata | gagttgaaat | ttatttggt | aggggaaggga | atcgggtagt | 1920 |
| attaataata | attttttttt | tttttttatt | taatttttat | tttttagttt | ttagtttttt | 1980 |
| aattttttta | tttttttatt | ttatgttttt | gttttgattt | ttgagttttt | ttgaaattta | 2040 |
| ttagaaaagt | taggaataaga | tagtttgatt | taatttttga | gttatttttt | taggttagtaa | 2100 |
| atatgttaga | aaaatgaaag | ttgtttggag | ttgataagga | aatggaagat | aatgtttttt | 2160 |
| tttgaggggg | atataaagaa | tggtgatagg | gaaagaatta | atgattaagt | aaaatgattg | 2220 |
| agaattttgt | acgaggtaga | tgtgtgagtt | tcgcgaagta | agttgattga | atgaaaaata | 2280 |

| | | | | | | |
|-------------|------------|-------------|------------|------------|------------|------|
| atcttgggta | gggaaaacgt | tgtcgggggt | attcgcggtt | attagtatta | cggatagcgt | 2340 |
| tttggtttata | tttaggtttg | ggtgggtttta | attagtttta | gatagaattt | taaagtttta | 2400 |
| tatttgattt | tttaaagttt | tttttttttc | gttaaataga | aaggatatta | tggaagttta | 2460 |
| atgaattttt | ttgaaaaatt | aatttggtta | atttggtttt | t | | 2501 |

<210> 176
 <211> 2501
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> chemically treated genomic DNA (Homo sapiens)

<400> 176

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| gtgttttagt | ttttgaattt | atgttggttcg | ttattatatt | gtattgtttg | tggtatgattt | 60 |
| atctgttttt | gtagttttat | ttgaagaatt | tttttttttt | tttttttgag | gtttgtttta | 120 |
| aatatttatt | ttttgtgaa | gattgtttgg | tggttttttag | gagagagtgt | gatttttttt | 180 |
| tttaggaatg | gtagtatttt | aaatatatat | atcttgtagt | atattttatt | ttgtatggta | 240 |
| atggtttggt | tgtgagtttt | atttcgtatt | agagggtgag | ggttttgaag | atagcgttag | 300 |
| tttttattta | tttcgatatt | ttataatatt | tattatatgt | ttgatgaatg | aatgtatagg | 360 |
| ggatgggttg | ggtgtatttt | ttttaatttt | tttaattttt | gaaataaata | ataaaatttt | 420 |
| tttttttttt | agaagttttg | gtatggtttt | ttttattttg | ttatagttat | tgataattat | 480 |
| ttttattttt | tgtgtaattt | attaggttaag | aagtttatgt | agattttatt | ttagtagttt | 540 |
| atatgataaa | taaatattgc | gtttgatttt | taaatattaa | attatagtat | attatagata | 600 |
| gatatagagt | tattatttta | gttatgatat | tttaatttta | aaaggttttt | tttgaagaat | 660 |
| attataaatt | tttttttttt | ttaagatttg | ttgggttagg | aagatgggag | aaaatgaatt | 720 |
| aatgtttata | tagaaaggag | gataatgggg | gtaaaaataa | tagatgaacg | tatgggtgga | 780 |
| tgagagaatg | gataaaatga | taggtggata | tggtgatttt | ggatagatgg | gaaatgagtg | 840 |
| gatataatga | taaataagata | tgtgggtgga | tggtgggaga | agaggatggt | ggatgggtgt | 900 |
| ggttttatga | agagatgtga | aaaagggaagt | gtggaatgat | ggatgagaag | ttgtatggga | 960 |
| agatgaatag | aagaataggt | ggttgaataa | attaaaaggt | gtgtggttgg | atgaatgaat | 1020 |
| gagtgggatg | atagatggat | ttaagtgggt | agtggatgga | taggaggatg | gatggatgtg | 1080 |
| agagttttag | aaagataata | ggaaagatgg | gtggatagat | ggatgggagg | atggaaggat | 1140 |
| atctaggagg | atgaatgagt | atgtgtgtgg | agagaggtgt | ttatttatat | tggtttgaat | 1200 |
| atatgggtta | gttgagttaa | atgttagttt | tatgataggt | tattagtagt | tttttttgag | 1260 |
| ttgttttggt | aagaagttaa | aatttatttt | agttatgtgg | atttggtatt | gaggggaaaa | 1320 |
| agaatgagtt | tttttttttt | ttattttgga | gatttattaa | ttttttattt | tttttttttt | 1380 |
| attgtgggta | cggagggtatt | gcgttatttt | gggtaagatt | tcgttttttt | tttagttttt | 1440 |
| tttttaggat | atttaatat | ttgtgaaatt | tagagatttt | gttttagtcg | gatttagaga | 1500 |
| aatctagcgg | gaaaggagag | gttaaagggt | gaatttaaat | gtgtaagggt | ttacggttcg | 1560 |
| ttattttttt | gttttgacgt | cgcggggtta | gcgggagaag | aaagttagtg | cgtttttggt | 1620 |
| cgtaggggtt | agtgggggtc | ggagggtatag | gtatttcgcg | atatttttag | tttttcgatt | 1680 |
| tacgtttttg | gtagtttcga | ttatttatag | tttttagtag | gtacggggcg | ggggttagagg | 1740 |
| ggttcgttcg | ggagggttgt | tattttttta | aatttttgcg | ggttggttag | ttatagtttt | 1800 |
| ttttgtttgg | gtgtgttttt | cgttcgtttt | tttttttcgt | tttaggttat | tgtttttaaat | 1860 |
| ttcgaataaa | aattgtagtt | aattttcgag | gtagttttat | tggttagcgg | attttagttt | 1920 |
| ttgttaggtt | cggttcgtta | ttttcgtttc | gtttttcgtc | ggtttttgtt | tcgcgttttag | 1980 |
| ggatttttta | gttttttttc | ttcgcgtttt | tcgttcgttt | cggatattat | ggataagttt | 2040 |
| tggtggtacg | tagtttggtg | atcttggttc | gtgtcgttga | gtttggcgtg | gatcgggtgag | 2100 |
| tggtcgtcgt | agtttggtga | gtaagatggg | tgcggggtgt | ttagcgcgga | ttcggcggtta | 2160 |
| gttttttcgg | ttgagtcggt | tttgggggat | tggagtttaag | tgagttgttt | gcgaagtgtta | 2220 |
| ttgggtttcg | gaaagttagg | ttgggatttg | cgttaaatcg | ttggagaatg | tgtttggtgga | 2280 |
| agtattattt | ggttgaaaga | aaaagagaaa | gagaagaaag | tttggtgggt | aggttgctcgg | 2340 |
| cgcgtagttt | tgggcgaggt | cgtttagagtt | gtagtatatg | gtagaaagta | atcgtttttt | 2400 |
| cggatgcgta | tagtcgttgt | ttggattaat | aggtttttgt | gtttaagggt | tcgttaagtt | 2460 |
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 <211> 2501
 <212> DNA
 <213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 177

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| ttatgtgttg | tagtttttagc | gatttcgttt | aaaattgcgc | gtcggtagtt | tgtttaataa | 180 |
| attttttttt | tttttttttt | tttttttaat | taaatgggtg | ttttatagat | atatttttta | 240 |
| acggttttagc | gtaaaatttta | gttttggttt | tcggagttta | atgtatttcg | tagatagttt | 300 |
| atttgatttt | agttttttag | ggtcgattta | gtcggagggt | ttgtcgtcgg | gttcgcgttg | 360 |
| agtatttcgt | atttattttg | ttgttttaggt | tgcggcgggt | atttatcgat | ttgcgttagg | 420 |
| tttagcggta | cgaggtagag | tttttaggtt | gogtggtatt | aaaatttggt | tatgggtgtc | 480 |
| ggagcgaacg | gagggcgcg | gcgaaaggag | ttggaggatt | tttgggcgcg | gggtaggggg | 540 |
| cggcgaggga | cgggacgagg | atggcggatc | gaatttggtg | gaggttgggg | ttcgttgggt | 600 |
| aatgaggttg | tttcggaagt | tggttgtagt | ttttattcga | ggttgaaaat | agtgatttaa | 660 |
| gacggaggga | gggagcgagc | gaaggatata | tttaagtaag | gggggttggt | at'taagtagt | 720 |
| tcgtagaggt | tttaagaagt | agtagttttt | tcgggcgggt | ttttttgttt | tcgtttcgtg | 780 |
| ttttgttgag | gttgtaaaata | atcgggggtg | ttagggacgt | gggtcgggga | atttggagtg | 840 |
| tcgcgggggt | tttgtgtttt | caggttttat | tggtttttgc | gtttagagac | gtattgggtt | 900 |
| tttttttcgc | ttgggttcgc | ggcgttagga | tagaggatga | tcgaatcgta | aaattttgta | 960 |
| attgggtt | tagtttttgg | tttttttttt | ttcgtttaa | ttttttgaat | tcggttggag | 1020 |
| aaagattttt | gggttttata | ggatgttgga | tattttggga | gaggagtgtg | agagaggcg | 1080 |
| aggttttgtt | ttgggtggcg | tagtgttttc | gtgtttatag | tggggagtga | gggggtggga | 1140 |
| gttggtgaat | tttttaagt | gaaagaggga | gagtttattt | tttttttttt | taataataag | 1200 |
| tttatatggt | ttgaatgaat | tttagttttt | tggtagaata | gtttaggga | agttattgat | 1260 |
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| ggtatttttt | tttatatata | tggttatttta | ttttttttaa | tattttttta | ttcgtttatt | 1380 |
| tattttttta | tttatttttt | tttatgtttt | tttgggggtt | ttatatttat | ttattttttt | 1440 |
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| attatttttg | tttttattat | tttttttttt | gtgtaaatat | taattttatt | ttttttattt | 1800 |
| tttttattta | gtagatttta | aagagaggaa | gagtttgtaa | tatttttttag | gggaagtttt | 1860 |
| ttgagattga | aatattatat | tttgaatgat | aattttatat | ttattttata | tatattatgg | 1920 |
| tttaattggt | ggaaattaaa | cgtagtattt | atttggtatg | tgaattatta | aaagtaaatt | 1980 |
| tgtaggtggt | ttttgtttgg | tgagttatat | agaaaatgaa | agtgtatttt | agtgggtgtg | 2040 |
| gtaagatgaa | aggaatttat | ttaggatttt | tgagggaagg | taagattttg | ttattttatt | 2100 |
| aaagaaattg | aaaagttgag | agaaatgtat | ttagttattt | ttttatgtat | ttattttatta | 2160 |
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| tttgaggaaat | attaggtagt | ttttataggg | gaagtgatat | ttgaggtagg | ttttaaggga | 2400 |
| aaaggaggag | gaatttttta | gatgaaatta | tagggataag | taagttattt | ataggtagta | 2460 |
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<220>

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| ttttttttta | agtttattag | ttattttata | gattagttat | aatttttggt | attttaatga | 120 |
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| ttgaataatg | tttatttttt | aaaataatgt | atataaaagt | tgtttaataa | atttttggtg | 240 |
| aattgagaga | aaatataaaa | aattgaaagt | agtttggttg | taataagtgt | ttgttaagtt | 300 |

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| gattaaaatg | tgatttttta | tatttttaata | ggagtaagta | ttagttttgt | aatttttttt | 420 |
| gttaatagaa | taaaaatgga | atgtatgttt | gttggtttta | tatgtcgggt | gatattttatg | 480 |
| ttgaatattt | tttttataac | gtagagggtt | ttttgttttt | tgttttgcgt | tttatttttg | 540 |
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| tcgtttttgt | ttattgattt | taagattttt | atcgtttttt | tgtgtttaga | aattagattt | 780 |
| tttagtttgt | tttgttttag | ttagataaat | gttttataaa | aatgatttat | attttttaga | 840 |
| ttgtggggag | agaagaaaaa | gattttgaga | aagtatttaa | ggagggagta | agagtgatat | 900 |
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| tttaagaata | aaaagaaggt | aataaagatt | ttatattttt | gtttttttta | gaaagttaaa | 1500 |
| agaattttaa | agtgttggt | gaaatgtttg | tttttaattt | gtagtgtttt | atttaaaaaa | 1560 |
| aaattatga | tataatttta | gaggataggt | tttttttttt | taggtgtttt | gaaagttaaa | 1620 |
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| attaataaaa | aaggagaagt | ttgaaatgta | attttaaaga | attttagaag | gaggttttaga | 1860 |
| tgaagataat | aaaatttttt | ggagatafat | ttgttattta | tatttttttt | ttttaagtta | 1920 |
| ttggtttggt | gttttttgagt | ttagttaaat | ttttaaagat | aagattfaaag | taaggaagta | 1980 |
| aggtatatag | tttttggttt | atgggttttt | ttagatataa | gtatttgtgaa | tgaagatttt | 2040 |
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| agagattt | gtagaggaa | aagtattttt | tttgaattcg | ataagggatt | tggttgggg | 4260 |
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<213> Artificial Sequence

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<223> chemically treated genomic DNA (Homo sapiens)

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| agtagaagaa | gtagtttttt | ttggattata | aaaataggag | taaatttgta | atagtagaag | 180 |
| ttattttaat | gttttaatta | ttagtttgaa | ttttatttaa | tgtagttatt | attaataata | 240 |
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572
46

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<220>

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| aaattagtcg | ggtgtgggtg | cgggogtttg | tagttttagt | tattttggag | gttgaggaag | 180 |
| gagaatggcg | tgaattcggg | agggtggagt | tgtagttagt | taagatcgtg | ttattgtatt | 240 |
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| gtaggaagag | gatcgtagcg | aagtgtgcgt | agcgaattgg | cgcgtcggga | tatcgcgggg | 960 |
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| agaggggtgg | aggctgttta | gaggaaaagg | aattgtttta | ttttatttta | ttttatttta | 1080 |
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| agtttttcga | gtaggtggaa | ttataggtgg | cgtgttatat | ttggttgatt | tttgattttt | 1320 |
| tagtagagac | gggtttttat | tatgttggtc | gggttggttt | cgaatttttg | atttttaggtg | 1380 |
| atttgtagct | ttcgggtttt | taagagtgtt | ggattatag | gcgtgagtta | ttacgttttg | 1440 |
| tcgttttaatt | tttatttgaa | gttttgggtt | atatgtagag | gatgtgtagg | tttggtatat | 1500 |
| agggtgtgtc | gttatgatgg | tttgttgtat | agattatttt | attatttagg | tattaagttt | 1560 |
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| tagtgtgtgt | tgatcgtcgt | tatgtgatta | tgtgttttta | ttgttttagt | tttattttata | 1680 |
| agttagatta | tgcggttttc | ttgggttttt | gtttttgtgt | gagtttggtg | aggttaacgg | 1740 |
| tttttaggtt | tatttatgtt | tttgtaaagg | atatgattac | gtttttttta | gtggttgtgt | 1800 |
| tttaggttat | tttttttggt | tttgttgttt | attttttggt | gattttgtaga | ttttttttta | 1860 |

| | | | | | | |
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| ttttagatat | tgatTTTTTg | ttggTTTTTg | atatgataga | tagTTTTTtt | tattttatta | 1920 |
| attgttaagt | ttgtttaagg | agTTTTTtat | gaaataaagt | tcgttaattt | aagtgttaatt | 1980 |
| aaatttagta | agggatTTTT | gtggTgggga | agaggTtTgt | gtttatgttg | tatttttaaa | 2040 |
| atTTtattta | atgtagtTat | taaaaagaat | tagattatgt | TTTTtTgtgg | atatggatgg | 2100 |
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| atattgtggT | tgattTTtagg | gtgtaggatg | ggaggaagga | gaggagtaga | aaagagaatt | 2280 |
| attgggtatt | cggTataata | TTTTggTgat | gaaatattTT | gtataataaa | tatcgaagat | 2340 |
| acgagTTTTat | ttatgtataa | aattTTTtata | tgtattTTTta | aaatagaaat | aaaagTtaaa | 2400 |
| aaataaagaa | atTTTtattta | aaagTTTTTt | TTaagagatt | tattatcggg | ggaaatttag | 2460 |
| TTTTtaatat | TTTactgtgg | TTTTTTTTTta | TTTTTTTTTaa | gtgtcggTtg | gtttgagaaa | 2520 |
| taaagggaaa | gagtataaaa | gagagatatt | TTaaagTcgg | gtgtTTtaggg | gagatattat | 2580 |
| atgttcgtag | gtTtcgTgat | gtTTTTTtag | tcgtaaaatt | agcgagTTTT | tattagtaat | 2640 |
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| gcgataaaaag | attatagggt | agaaggttac | ggcgaaatta | gaattattaa | tgaattTTTta | 2760 |
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| ttaggTtgga | atTTTttaaT | TTTTattaagt | TTgggggtgt | tgtaggagat | tagggcgtgt | 2880 |
| TTtattTTTT | TTtattTTTTg | aataaaggta | ggTattTTTta | gggaggttat | TTtagTggtt | 2940 |
| cggTTTTtggg | aatgtattTTt | TTTTTTtaggg | TTgttaatta | TTaatattTT | TTattgggga | 3000 |
| aagaatttag | cgatattTTTt | TTTTttTgtt | Tgcggtaata | agagaagtat | ggTTTTgttt | 3060 |
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| ataaataaatt | TgtgtagTta | acgtagTtat | Tatagggttt | taaggcagata | TatattTTTta | 3240 |
| gtttacgaag | atgataggat | taagagattta | aagataggta | taggaaatta | taagagtatt | 3300 |
| gattggggaa | gtgataaatg | TTTTatgaaat | TTTTataatt | TatgtTTTTt | Tgttatgggt | 3360 |
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| attataggtta | TgtgtTattta | TatTTtagTta | atTTTTgtat | TTTTTgtaga | gatggggttt | 3540 |
| Tattatgttg | TTtaggtTgt | TTTTTTTTTtt | TTTTTTTTTtt | TTTTaaattt | TTattaattgg | 3600 |
| attgaggtta | taagggaagt | TTTTaaattt | TTgttatTTTt | gggtTTTTTtt | TaattTTtatt | 3660 |
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| TgtTTTTTcgg | TTTgaggttg | gttattTTTTt | TTtagTTTTg | agaaatgtat | TTTTattgtt | 3780 |
| TTTTTTgaga | TgtTTTTTTTT | TTcgTTTTTtt | TTTTTTTTTtt | TTTTTTTTTtt | TTTTTTTTTtt | 3840 |
| TTTTTTTTTtt | TTTTTgtatt | atTTTgaaaa | TggTTTTTTTT | aatttattTTt | TTtattattt | 3900 |
| TattgtTTTTt | TTTTTTTTTtt | agataggTtg | TTattTTtatt | gtttaggTtg | gagtgtattg | 3960 |
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| TTTTTgagta | gtTgggatta | taggtgtTTTg | TTattatatt | TggTTaaattt | TTgtattTTTt | 4080 |
| agtagagata | gggtTTTtatt | atgtTTggTta | ggTtggTTTTt | aaattTTTtga | TTTTaagtga | 4140 |
| TTtattTgtt | TcgggtTTTTt | aaagtgtTgg | gattatagggc | gtgagTtatt | gcgtTTTgggt | 4200 |
| atTTcogatgt | TattTgtgtt | TTTTTTgggt | TgtTTTTTTTT | gggagagagt | TTTTtagTtg | 4260 |
| TTTTtattat | TTattTTTTt | atTTtatgagt | cgtatattTtc | gtatgattTta | TTTTattTgt | 4320 |
| gtTtggtTTTt | TTTcgatttat | TgtTTTTtata | TTTTattTTTt | TTTTTgtTtg | TTTTTgtTaa | 4380 |
| TTTTTTattg | TTagtTgttt | TTTTtatgtt | TTTTatgattt | TTTTTgtgtg | TattTTTTcgt | 4440 |
| TTgtgtgttg | TatttattTta | gcgttagggg | atgtTTTTgtt | TTTTTgagat | gtttTTTTTg | 4500 |
| gaattagtga | gtTtTgtgtt | TTTTTTTggT | ggTattTgggt | atTTTTTcgg | gtagtattgt | 4560 |
| agTTTgtggT | TTTaaagTaa | aggaaggaga | taagtatttat | Tdaattatag | TTaattTTTTt | 4620 |
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| gaagtagcgt | Tggggaaggt | ggTTTTTtat | gtTTTaatgt | gtTggTgttg | ggTgtTTTta | 4740 |
| ggggaagtgt | gggagggaga | aagTtcgTtt | TatttagTttt | TattgtTTTTt | TTtagTgttt | 4800 |
| Tatttagtag | aggTtagtag | aggTtaattt | cggTTtagtt | Tgtattaggg | TTagtTgtTta | 4860 |
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| TTTTTTTTTgg | TattTTtatta | tagTtattTTt | tagTtacctt | tagTTTTtat | TTatatatat | 4980 |
| atTTTTacgc | gtattTTattt | atattTTTgt | atattTtagat | atatataggt | TTaatatagt | 5040 |
| TTgtagTTTTt | Taggaggggc | gacgtTTtat | TTtattTgtt | TaattTTtatt | gtTTTTTTga | 5100 |
| aattTTTTgtt | TTTTTTTgtg | gtTTTTTTTta | TattTTTTatc | ggagagggta | acgaaagTtt | 5160 |
| atgatagTTTt | attattTtaaa | TTaaggattg | ggatattatg | gatcgtgggt | TattattTgt | 5220 |
| TTgtgTaaat | aaagTTTTtat | TgggtTTTtag | TTatgtTTtat | TTatgtgtgt | gttattTtatg | 5280 |
| TTTgtTTTTTg | TgttatagTg | gtTTTaaatga | gtgattTgtaa | tagagattat | gtggTTTTTta | 5340 |
| aagTTtaaga | TattTTTTTTt | TTTTTTTtag | TTTTTTTtag | atggagTTTg | gtTTTgtcgt | 5400 |
| TTaggtTgga | gtgtagtggT | acgattTTTgg | TTtattTgtaa | gtTTTattTTt | TcgggtTTTtac | 5460 |
| gttattTTTTt | TTTTTTtagTt | TTtagagtag | TTgggatttat | aggcgtTcgt | Tatttatattc | 5520 |
| ggTTaattTTt | TTgtattTTTT | agtagagacg | gggtTTTtatt | gtgttagTta | ggatggtTtc | 5580 |
| gattTTTTTga | TTTTTgtgatt | cgtTTgtTTt | agTTTTTTTaa | agtgtTggga | TTataggTgt | 5640 |

gagttatcg

5649

<210> 186

<211> 1631

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 186

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| gaagttttcg | ttaggtatcg | aagtcgt'gaa | gtcgttttgcg | tagtaaaggg | agttttcggg | 120 |
| gggcgttcga | gatttttggtg | tcgttcgggg | gtcgtttggtg | gtcgcgttcg | ttgttttttcg | 180 |
| ttcgggtgatt | tagtcggtat | ttttggcggg | gttatggggg | ttagaggata | gcgcgggggg | 240 |
| cggcgagcgc | ggttggttaag | ttttttaagg | tttcggaggg | ataggatttg | ggcgtatttt | 300 |
| atcggttgtt | atggtaacgt | agcgttttag | tttttcgcgt | ttcgcggtgg | agggaggcgt | 360 |
| agttaatcgg | aagcggcgga | gttttcgggg | attttttttt | tttcgtttta | cgtcgtgtgt | 420 |
| gggcgggggt | taggaggtgc | ggggcggagg | cggagcgtgg | gtcgcggaga | ttcggcggtc | 480 |
| aggaggtt | tgggtgcgcg | cggggttgta | cggggttatt | ttcggagtag | tattgcgagt | 540 |
| cggcgcgga | tagtgcgggg | tttttttttt | tttagaagag | acgttattta | tataaatttg | 600 |
| ttttttacgt | ggggcgcggg | attttgccgg | gttttagtcg | taggcgtttt | tgttgttttt | 660 |
| ttcgggcggg | tgggttgag | aagaagt'tta | cgcgggattt | tttaaaacgg | cgtatagggg | 720 |
| gatttttaggg | ttttatgggt | atttttttgg | attttttcgga | ggcgttggtt | agttattttt | 780 |
| agt'cgttttg | atgattcgtc | gtgggttttt | ttaggagatt | cgaaagt'tta | gggcggggtg | 840 |
| tgtgggtaat | atttttgttt | agggttttcg | agggttttac | gtggttggtt | ttggagtatt | 900 |
| ttagagcgtt | agggttgccg | gaaggggcgg | gtgtgttttt | ggaaatatga | gcgtttgtta | 960 |
| gtattagtgt | ttggataggg | ttggggataa | attagtttat | gtcgcgtata | tcgaatttat | 1020 |
| gcgtttgagt | gagggtgggt | gtgttgggga | gtgcgtttta | gtggatagtg | tcgtatagta | 1080 |
| atgtttacgg | ggagttttag | gagagttcgg | ttattttttgc | gtaggataat | ttttttttta | 1140 |
| ttattcagagt | ttcgtgttcg | cgggtaggat | tttttcgaat | tgggggttggt | tgtttagaaa | 1200 |
| tacgtatatg | ggagcgt'tta | gtttaaagt't | ttagggtttt | tgggattcgc | gtgttcgggg | 1260 |
| tcgggggtttt | agggtgggtat | agggtggagg | gcgaatttgc | gggtagggtg | ggtttttttt | 1320 |
| cgcgggt'tta | gtattt'gtgc | gttttttagtt | taggtgcgcg | ggagggaagg | agcgttttgt | 1380 |
| cgcgtagagt | tttgcgcggt | cgcgaggttg | cgttatagtc | gtagtagcgt | tcgtcggttc | 1440 |
| gggtcgtttt | agataagagt | gtgcggaaag | cgcggcgggg | ttgagacgcg | attaggacgc | 1500 |
| ggggaggacg | gattagtagg | atagatcgat | cgggggttcg | gcgggcggag | ggtagcgtag | 1560 |
| ttacgttttt | tttggattcg | tcgttagtcg | ggttcggggg | tttcgatatg | tttttttaggt | 1620 |
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<210> 187

<211> 1631

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 187

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| gggggacgtg | gttgcgttgt | ttttcgttcg | tcgggttttc | ggtcggtttg | ttttgttggt | 120 |
| tcgttttttt | cgcgttttgg | tcgcgtttta | gtttcgtcgc | gttttttcgta | tatttttatt | 180 |
| tggagcgggt | cgggtcggcg | ggcgttggtg | cggttatgce | gttatttcgc | gggcgcgtag | 240 |
| ggttttgcgc | ggtaggtcgt | tgtttttttt | tcgcgtattt | gagttggagg | cgtatagatg | 300 |
| ttgagttcgc | ggggaggggt | ttattttatt | cgtaggttcg | tttttttatt | tgtattttatt | 360 |
| tgggatttcg | atttcggata | cgcgagtttt | agaaattttg | gggttttgag | ttgagcgttt | 420 |
| ttatgtacgt | attttttagt | atatagtttt | agttcggaaa | agttttgttc | gcgagtacgg | 480 |
| gattcgggtg | gtgggggaga | ggttattttg | cgtaggagta | gtcaggtttt | tttggaattt | 540 |
| ttcgtagata | ttattgtacg | gtattgttta | tttgacgta | ttttttaata | tattttattt | 600 |
| tatttaggcg | tatggattcg | gtgtgcgcgg | tataaattga | tttggtttta | gttttattta | 660 |
| ggtattgata | ttaataggcg | tttatgtttt | tagaagtata | ttcgtttttt | ttcgtagttt | 720 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| tagcggtttt | ggatatttta | ggggtagtta | cgtaggggtt | ttcgggaatt | tgggtagagg | 780 |
| tggtatttat | atagttcgtt | ttgaattttc | gggtttttta | aaggaattta | cgacgagtta | 840 |
| ttagggcgat | tggaaagtgt | tggatagcgt | tttcgggggg | tttaaagaag | taattatggg | 900 |
| gttttagaat | ttttttgtac | gtcgttttga | agaatttcgc | gtggattttt | tttttaattt | 960 |
| attcgttcga | aggaataaat | aggggcgttt | gcggttggga | tttcgtaagg | tttcgcgttt | 1020 |
| tacgtgaagg | ttaggtttgt | gtgggtgacg | tttttttttg | gagaaagggg | atttcgtatt | 1080 |
| gtcgcgtcgt | tggttcgtag | attatttcgg | aagtggtttc | gtgtagtttc | gtcgcgtatt | 1140 |
| aagttttttg | cgaacgtcgg | attttcgcgg | tttacgtttc | gttttcgttt | cgtatttttt | 1200 |
| gatttttcgt | tatatacggc | gtggagcggg | gggggggggg | ttttcgagaa | tttcgctcgt | 1260 |
| ttcgatttgt | tgcgtttttt | tttatcgcgg | agcgcgaggg | gttgggcggt | tgcgtttata | 1320 |
| tggtaatcgg | tgaggtgcgt | ttagattttg | ttttttcgag | gttttgagga | gtttagtaat | 1380 |
| cgcgttcgtc | gtttttcgcg | ttgttttttg | gttttttatg | tttcgttaga | ggatcgcgtt | 1440 |
| gagttabcgg | gcgaggggta | gcgggcgcgg | ttattagcgg | ttttcgagcg | atattaaggt | 1500 |
| ttcgggcgtt | tttcggaggt | tttttttgtt | gcgtaggcga | ttttacggtt | tcggtgtttg | 1560 |
| gcggagggtt | cggtttaaac | gagttcgttt | gatttttcgt | gttggttgag | ttcgttttat | 1620 |
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<210> 188

<211> 6680

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 188

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| agagattatg | gtgggggagt | ggttggtaga | gaattttggg | gataaggagg | gttttttata | 120 |
| ttttattttt | aaattatgtg | aatgtgttat | ttattttaaag | tggttatatga | gagtttttga | 180 |
| tttagaggta | tatttttttag | tttgtaagaa | tggttattttt | atagggttga | aattttttatg | 240 |
| agaaataaag | tttttttttt | taaattttatg | aatagattaa | ttagtttaag | gaatatttta | 300 |
| ttgattttta | attggattttt | ttcggtttag | cgattgaaga | ttgatatagt | tcgatcgttt | 360 |
| cggaggtttt | ttgggttatt | atggacgtcg | agtttcgggt | aattttttata | gtggaggata | 420 |
| ggaatgttag | gttttttgagt | tttaagttaag | ttattatatt | tttagtgatt | tgtacgtata | 480 |
| tattaagatg | gtttgaagta | attgaagatt | tatagaagtg | aaaatagttt | taattgatga | 540 |
| tattttatta | ttgtgatttg | tttttgtttt | attttaattg | attaatgtat | tttgtaattt | 600 |
| tttttatttt | taagaaggtt | ttttataatg | ttattttatt | ttaagaagtt | tttttgtaatt | 660 |
| tttttttatt | tttgagaatg | tatttttgtga | gattttatttt | ttgttttttaa | aatattgttt | 720 |
| tttaattttat | tgttttatttt | aaaattttata | agaatttaag | ataattttat | tattttttgt | 780 |
| ttcggttttt | ttcggatttta | gttcggtttgt | atttaggtga | aataaatagt | tttggtgttt | 840 |
| aaaaaataaa | aaataaaaaat | aaaaataaaa | aataaagtgt | taaatgaatt | gaattttaatt | 900 |
| ttatgggaag | agtttaattta | gtaattataa | tttttattaa | agggtgaaag | tttaatatgt | 960 |
| attttatttt | tttaataattt | atagtaggtt | aggtatcgcg | gtttacgttt | gtaatttttg | 1020 |
| tattttggga | ggtcgaggta | ggtggattat | ttgaggttag | gagtttgaga | ttagtttgat | 1080 |
| taacgtgatg | aaattttatt | tttattaaaa | atataaaaaa | ttagttgggt | atgggtggcg | 1140 |
| atattttgta | tttttagttat | ttaggaggtt | gaggcgggag | aatcgtttga | atttgggagg | 1200 |
| cggaggttgt | agttagttga | gattgtatta | ttgtattgta | gtttgggtta | taaaagtaaa | 1260 |
| atttcgtttt | aaaaaataaa | aataaaataa | tttatagtaa | ttaggaaata | tttttagtaa | 1320 |
| tgatatttta | taagtgtata | gtatttttaa | tgtgttaggt | attgtgttgt | ttttatttat | 1380 |
| attattttat | tttaattttta | ttatttttag | agtgtaatgt | tttaatatta | tagaagagat | 1440 |
| agaagattat | agaaggatga | gagaggttgt | tttttttttt | tttttttttg | agacggaggt | 1500 |
| ttgttgtgtc | gttttaggttg | gaaggtagtg | gcgtgaattc | ggtttattgt | aattttttatt | 1560 |
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| gttattatgt | ttgggttaatt | ttttgtattt | ttagtagaga | cgggttttta | tcgtgttagt | 1680 |
| taggatgggt | tcgatttttt | gattttgtga | ttcgttttgt | ttagtttttt | aaagtgttgg | 1740 |
| gattagaggt | gtgagtttag | gtgttcgggt | aagaggttgt | ttttttttta | agttttttgt | 1800 |
| aaatatttag | gcgttattat | tttgggttag | gtttgaggat | gggtattgta | ttagggatat | 1860 |
| taagataaag | atagtatttt | gttttttagg | atttaaatgt | ttagtaggag | agatcgatgt | 1920 |
| gtaaaatagt | agattttatg | ataggttttg | aatagagaag | ggagtgttag | agtatagtgt | 1980 |
| ttgaggatta | ggagataaag | ggaatagaga | gatcggggat | aataagtaaa | ttttttttac | 2040 |
| gatatttttt | ggtcgaggat | aggtttcgaa | agtagttgtg | gaatttgag | gcgttatgtg | 2100 |
| ggagataaat | ttttagtatt | taagtttaat | aatgaataaa | ggttgtcggg | tttttttgga | 2160 |

| | | | | | | |
|-------------|--------------|--------------|-------------|-------------|-------------|------|
| ggagaggaga | tttgataacg | gtttggttcg | tcgtttgatt | agtgtagata | tttttttttag | 2220 |
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<220>

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<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 192

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| atataatata | ttttgttatg | gggattgtat | tgtttaaata | tgtagagata | aggttttgggt | 180 |
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<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

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| gggggtggat | tattttaagg | taggagttta | agattagttt | ggttaatatg | gcgagatttt | 180 |
| tatttttatt | aaaaatatga | aaattagttt | agtgtgacgg | tgggtatttt | taatttttagt | 240 |
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| tttgagttaa | agtaattttt | ttattttttg | tttttgagaa | gttgggaata | taaaaaaaaa | 8880 |
| attaaaataa | aaaaatatta | gagtttttatt | cgttattttag | gttggagtgt | aatggtacga | 8940 |
| tttcggttta | ttgtaatttt | tatttttttag | gtttaagcga | tttttttggt | ttagttttttt | 9000 |
| aaatagttag | aattataggt | atttattatt | atatttggtt | aatttttgta | ttgttagtag | 9060 |
| agacgggttt | ttattatatt | ggttaggtta | agtttcgaat | ttttgatttt | aggtgattta | 9120 |
| tttatttttg | ttttttaaat | tgttgggatt | ataggtgtga | gttattatat | ttggtttaaat | 9180 |
| tttttaaaatt | ttttatagag | atgatatttt | attatgttgt | ttagattggg | ttgaaattttt | 9240 |
| tgaagttaag | taattttttt | attttggttt | ttataaagtg | ttgggattat | aagtgtgagt | 9300 |
| tattgtgttt | gttcgttcgg | ttttaaaatg | gtggggattt | aaagttaaag | agatttttatt | 9360 |
| ttttaatttt | taggttttata | aggggttagg | tttaaaagtt | ttttatagaa | atttcgaaaa | 9420 |
| cgggtttaat | tttaaaaggt | aagtttttcg | gaaattggat | ttcggggctg | gtttattata | 9480 |
| taaaggggat | tatatatttt | ttaaaagggt | tttgggaaaa | aggagggtga | ggggttttttt | 9540 |
| taaaaggggt | ggatttaagt | ttaaaaacgg | ggaagaaatt | taggtttata | gggtttttttt | 9600 |
| aaaaaattgt | taaaattggg | gggaaaaatt | cgtaaaattt | cgggggggta | aaaaaaattg | 9660 |
| gaaaattggg | ttaaagggga | ataattttatg | ggtttttttt | atttattttg | gatttttattt | 9720 |
| tgggggtttt | ataggggtatt | ttgggttttaa | attaaggggg | tttttttttt | ttcgtttttaa | 9780 |
| ttttttaaaa | gggttttttg | gttaaaaattt | tcgagggtttt | taggattggg | gatttttggtt | 9840 |
| taaattttta | aaattttttg | gggggttaaaa | gaaagggtttt | tttttttttt | ttttttttttt | 9900 |
| tttttttttt | tttttagatag | aattttcgtt | tgtggttttag | gttggagtgt | agtgggtgtaa | 9960 |
| ttcgggttta | ttgtaatttt | cgtttttttag | gtttaagtta | tttttttggt | ttagtttgta | 10020 |
| gttgggatta | taggcgcgtg | ttattatatt | tgggttaattt | ttgtattttt | attttattttt | 10080 |
| tttgagagag | agtttttattt | tgtcgttttag | gttggagtgt | tatgggtacga | ttttgggttta | 10140 |
| ttgtaatttt | tgttttttag | gtttaaaaga | tttttttggt | ttagtttttt | gagtagttgg | 10200 |
| gattgtaggc | gtttattatt | atgttttagt | tattttttgt | attttttagta | gagacggggg | 10260 |
| tttatattat | tgggttaggtt | ggtttcgagt | ttttaatttt | atgattttatt | tgtttcgggtt | 10320 |
| ttttaaagtg | ttgggatttat | aggcgtgagt | tatcgtgtac | ggttattaatt | ttttgtattt | 10380 |
| ttagtagaga | tgggggtttta | ttatgtttggt | taggtttggtt | ttgaattttt | gacgttaagt | 10440 |
| agtttggttg | tttcgtttttt | ttaaaatgtt | gggattatag | gcgtgagtta | tcgtattttag | 10500 |
| ttttaaagta | agttattttaa | tttttaaaaa | aggtattttt | agagttattt | agtttaattt | 10560 |
| ttttattaat | agttgaagaa | gtatttttgg | taatatgggt | tgatggtagg | taaaggggtg | 10620 |
| aagtttaggt | tttatgatta | tatttttattt | tatagtatta | tagttttttt | gtataaatta | 10680 |
| attttgtatt | ttttaatcgg | ttatgatttt | tataaggtaa | taaatatata | tatgtatata | 10740 |
| tattgttaat | tgtaaagtttt | tttttttatag | atttaggttag | gagtgtaggt | ttttttaaga | 10800 |
| ggttttttatt | tttttttttat | agggagttta | ttgtttttgt | taatatataa | ttaaagtttt | 10860 |
| gttttttatat | atttaggttaa | tgtaattttt | atgatagaat | gtgtatgtag | aagttttttat | 10920 |
| aaattaggat | tttattggag | atattatgaa | attgtatttt | tttatgattg | gagaattgta | 10980 |
| taaatggggg | attattatat | aagtattttg | ttattatata | tatattttg | | 11029 |

<10> 194

<11> 1157

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 194

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| ggattttggt | ttttttgaag | gttttaggga | agagtgtttt | ttgttttttt | cgaagggtttt | 60 |
| aggggaagggt | ttgttttttt | aggttttttg | tggttttag | gtgtagtttt | tttaatttttt | 120 |
| tttttaagcg | gtttgtttgt | tataaggata | cgagttatat | tggatgagg | gtttattaat | 180 |
| tgatgggttt | tgtaaagttt | ttatttttaa | ataaggttat | attgtgaggt | attgggaggt | 240 |
| aggattttta | tatagttttt | ttgggtggata | taattttaatt | tttaataacg | tttatataat | 300 |
| tttaagtagg | gtttgtgtatt | ttgtgtgttt | tttggagagc | ggttgagtta | ggtttttgga | 360 |
| gtgttttaggt | tatcgggtgat | tgtagttttt | ggacggtatc | gtttattata | ggttttggag | 420 |
| gttgttttta | cggttttttt | ataggggttt | tgttggtttg | gggggttttt | attaggggag | 480 |
| cggtttttag | aggggagaga | ttcgcgtttc | gggttttagc | tagtcgtttc | gagtaggata | 540 |
| gggattttta | ttaagcgggg | gtcgtttttac | gatttttcgc | cgttttttag | attattcggg | 600 |
| tacgtggtag | gtcgttttgt | cgttcgcgga | ttatttttgt | gataggaaaa | ggtacgggtt | 660 |
| atttggtaaa | ttaaggtata | gagtttttag | cggaagttgg | gaaggcgtcg | ttcgggtttgt | 720 |
| atcgggtcgaa | gggttatttc | ggtttaggcgt | atagggtagc | ggcgttgctc | gaggattagg | 780 |

| | | | | | | |
|-------------|------------|------------|-------------|------------|------------|------|
| gtcggcggtgt | cggcggttag | cgaggatgcg | tagattgttt | taggttcggc | gtcgtcgtat | 840 |
| tgggtatgcg | tcgattcggg | cgggcgggaa | tatttcgttt | cgttcgggtt | tcgttttagt | 900 |
| ttcgttttcg | cgcgtttcgg | tttcgttttc | gcgcgttttt | ttgttttttt | taggttttcg | 960 |
| gtttcgtttc | gttttagatt | tcgttttacg | tcgttatatt | cgtgtttttc | ggtttcgttt | 1020 |
| tcgcgttttc | gatatgttgg | gatatgttcg | gttttttagaa | cgttttgcgt | ttcgacgttc | 1080 |
| gtaggttttc | gcgggtgcga | tcgtttgcga | tttgggtgag | gtttgggtcg | tttcgttttc | 1140 |
| ggaagagtgc | ggagttt | | | | | 1157 |

<210> 195

<211> 1157

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 195

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| gagtttcgta | ttttttcggg | agcagggcga | tttagatatt | tattaagtcg | taaacgggtgc | 60 |
| gtatcgcgag | gattttcggg | cgtcgggacg | taaagcggtt | taggggcgcg | ggttgtttta | 120 |
| ttatattcgg | ggcgcggggg | cggggtcgag | gggtacgggg | atggcggcgt | ggggcggggg | 180 |
| agagcggg | gcggagtcga | ggatttgaga | aaagtaagag | agcgcgcggg | ggcgggggtcg | 240 |
| gggcgcgcgg | gggcggagtt | ggggcggagt | tcgggcgggg | cggggtgttt | tcgttcgata | 300 |
| gggtcggcgt | atgttttagt | cggcggcgtc | gggtttgag | tagtttgctg | attttcgttg | 360 |
| gacgtcggta | cgtcgggttt | ggtttttcgg | tagcgtcgtt | gttttgctg | tttgattcgg | 420 |
| atgggttttc | ggtcgggtata | agtcgggacg | cgttttttta | gttttcgttt | gaggttttgt | 480 |
| gttttagttt | gttaaatggt | tcgtattttt | ttttgttata | gggatatgtc | gcgggcgtgt | 540 |
| aagcgatttg | ttacgtgttc | gagtgggttt | gaaagcgcgc | gggggtcgta | ggacggcgtt | 600 |
| cgtttagtga | gaatttcggt | tttggtcggg | gcggttacgt | tgagttcgga | gcgcgagttt | 660 |
| tttttttttt | ggggtcgttt | ttttagttag | ggatttttag | attagtagag | attttgttag | 720 |
| ggggtcgtgg | gggtagtttt | tagggtttgt | gggtggcgat | gtcgttttag | ggttgtagtt | 780 |
| atcgatgggt | tagatatgtt | tagagtttga | tttagtcgtt | ttttagagag | tatatagggt | 840 |
| gttaggtttt | gtttgggttt | gtgtggacgt | tattaggagt | tgaattgtgt | ttattagaga | 900 |
| agttatgttg | gagttttaat | ttttagtatt | ttataatgtg | attttatttg | gagatgggga | 960 |
| ttttatagaa | gttattaatt | agtgggtttt | ttatttagta | tgattcgtgt | ttttataggt | 1020 |
| agtaggtcgt | ttggggagga | ggattggagg | gttgattttg | taagttatta | gaagtttaag | 1080 |
| aggatagatt | tttttttggg | gttttcggag | ggagtagagg | atattttttt | ttggagtttt | 1140 |
| tagaggaggt | aggattt | | | | | 1157 |

<210> 196

<211> 8093

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 196

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| tttttttaaa | aatacgaaga | atagatatgt | aagggaagag | gtgtttgtaa | agattaagaa | 120 |
| agtatatatt | gagatgggat | tttttttaaag | ttaaagttat | taagtgttta | agtgttttaa | 180 |
| ggagggttaag | attattaata | aggatttagt | atagtagagt | aatttgagtg | gtaatacggg | 240 |
| atattgggaa | tataaatttg | ttaagaaaat | tagtaggaat | gagttatagg | atagtaattg | 300 |
| gtaaggattt | aataattttt | tttttaaatgt | acgtatttta | attatattta | ttgtttataat | 360 |
| aggattagta | ataattatat | ttattttaaaa | aaaaaaaagat | tgttatgtag | ttatagaatt | 420 |
| atttaatat | gaaaatagta | aaatatattt | tttttttttt | tttttttttt | tttttttttt | 480 |
| ataaataaga | ttagtattata | gtaaattttt | tatagttaag | ggtttaattta | aaatttttgg | 540 |
| tttatatttt | tttttttatt | aatgattata | tgaagttaaat | taattttatt | aatatttttaa | 600 |
| gtaaaatata | ttggaatttt | ataaaaatgta | taagattttta | atatttttaag | aattgggggt | 660 |
| agaaagtaga | agtgggtttt | aggtttttta | gttttttttt | taagtaataa | agttttgttg | 720 |
| tgaatattta | aagttatttg | gaaattatcg | gtagattttt | ttgttttttt | ttttcgggtt | 780 |
| tttattatgt | tgttttttta | gatatgtaag | tttattttat | taattaaaaat | tttagtttga | 840 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ttatTTTTga | taagtattta | atcgatatgt | aattTTTTtt | ttgTTTTtaa | tatgtataat | 900 |
| aggatagagt | TTTTaaattt | gatTTaatta | ttaattTTTT | atttataagt | gttatgggtga | 960 |
| gttaatagaa | TTTattaatg | TTTTtattgt | attttattag | ttaaatttag | aagggtggaa | 1020 |
| ttagTTTTtt | ttatttagta | TTTTgttagt | ttgTTtaggt | tgtattTTta | attttgtttt | 1080 |
| taatggtaat | ttgTTTTatt | TTTTgaaata | aaataattta | tattttggga | gggttaattt | 1140 |
| TTtattgtgt | taggttgttt | tatgtattgt | aggggtgagt | gttttttaggt | ttaaattgta | 1200 |
| atagaagttt | ttagtaaata | tgataattaa | aaaagtgttt | ttatatattt | tttagtattt | 1260 |
| TTtggaatga | taggttattg | TTTTtagttg | aaagttattg | gtataatttt | ggTTTTtaag | 1320 |
| TTTTtatgtt | atttattTTa | attgTTtaga | tattaatttt | atttaaattt | ttagttatag | 1380 |
| TTtggtTTTT | tgaatttgtt | ggatttagtaa | ttatagatta | aggtgtTTta | atagttaaaga | 1440 |
| taggattttg | gaataagagt | TTTTaaattg | tataatattt | gagaggattt | atgaatataa | 1500 |
| attgggtttt | gtttataaatt | agttttatat | aatgaatttt | aagattgttt | TTTTatggtg | 1560 |
| aatagaagtt | tggaaattat | tgttttggtg | taaagtagat | tatttttagta | gaaatataga | 1620 |
| attattgtaa | TTTgtgaata | agattgtttt | taaatatttt | tatttgtgtg | ttattttata | 1680 |
| tatagaatgt | gtacgatagt | TTtaaatttt | agaataaaatt | tatttttagt | atttaataaaa | 1740 |
| atttgatatt | gtattatttt | aaaataaaagt | gtttattTTa | ggtaggattt | TTTTaaataa | 1800 |
| agtagtaata | TTTactaga | taagataaaa | aagttaaaat | attttatatt | TTTTaatttt | 1860 |
| ggagtgtaat | TTTTTTTTtt | tatcgTTTTt | gatagggtta | aatttgtgtt | tatagtaaaa | 1920 |
| aaaaaaaaaa | aaagaattat | taattggtaa | ttattaagat | TTtataTTta | TTtatagttt | 1980 |
| TTaataggta | agttgataaa | atagttTTTta | gttattaaaa | aaaaaaTTta | aggaaaattt | 2040 |
| TTaataatta | gttttatttt | taaattgtat | gaagttTTTT | atatttgaaa | TTtaaaaaatg | 2100 |
| TTttaatga | TTTTTTTTtat | tagtaattgtg | ttattattga | ggtgggtgat | ggggagggaa | 2160 |
| gagggaagaa | atttgttagt | attattttcg | aattagaaa | tgtttaaaaa | aaagttttta | 2220 |
| atattttgat | ggtagataaa | aatattTTTta | ttgttatgta | tgggtTTTTt | TTTTggaat | 2280 |
| ttatgaattt | gttatgtgag | TTTTgttaa | ttggtTTtaa | agtatatTTa | aggagtgtgat | 2340 |
| aatttaagat | tatatgaatt | agaattTTaa | tattttatta | aaataagagt | tgaatttttt | 2400 |
| ggtattttatt | TTtagaatat | TTaaaaaata | gattgtaaa | TTaatttata | TTaatattaa | 2460 |
| atttttttaa | aattaattat | attataaaag | ataatgattt | tgattataaa | TTaagtttta | 2520 |
| aaaaagggtg | tattttttatg | TTTTagtttt | atggtgttat | ttgagatgaa | aaaaaaggta | 2580 |
| attgttagaa | TTTTaattgt | gattagtttg | gacggttggt | atttgggtatt | TTTTtataat | 2640 |
| TTaaattagt | aaatttgaaa | attttaaatta | atttttgttt | ttagaattaa | atttttgttg | 2700 |
| agtttttttaa | TTTTgtatta | taaagTTTta | tggattagat | ttattttttt | TTTTtataag | 2760 |
| gttattTTTaa | tCGggTTTTa | TTTTtagttgt | ggtaattcga | aatagggttt | ggagatgttt | 2820 |
| atttgttaat | ggttgattta | aaagtgtgtg | gtttcagagt | aaatatgaaa | aagttttttt | 2880 |
| atagatttgg | ttattattaa | ataaggatgt | tatttttatag | gtaatttttt | tgataattgg | 2940 |
| gtaggattta | gtagataaatt | tagtataaaa | ttgtTTtaag | TTTTtgattt | tgtattttatt | 3000 |
| TTaaagatta | gtgtttgttt | gaagttttgt | tagttttatt | TTtattgaaa | taggtgtata | 3060 |
| TTtaggttta | aagttaaatg | gatttgaaaa | aagttTTtaag | TTTTTTTTaa | tgaatttgag | 3120 |
| gtttttaaaa | tgttttttaa | attttttttg | gagacgatag | attattattt | gatattttatt | 3180 |
| aggattaaat | atttttttat | TTTTTTTTatt | ttgttgtttt | agtttattaa | taattttttt | 3240 |
| gggtagga | aagtttgtta | gatttttttt | TTtaatatgt | TTTTgaaata | aatttagttt | 3300 |
| TTTTcgaaa | gtataaatat | ggTTaaagggt | agtagtagta | aagattttat | taattcgtaa | 3360 |
| TTTTttattg | agttttcga | gggtttttat | aatgtttatt | aagaagttaa | agttataaag | 3420 |
| ttattgtttg | TTtgagaagt | ggattgttgt | tgtttttatt | gaaattaaaga | acgtttttat | 3480 |
| TTTTTTTTtt | agagagaata | ttagttTTTaa | agtttttttt | TTTTtaagtt | aattgttttag | 3540 |
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| atcgcggata | aagattagga | ggtagtTTTT | ataggttata | aaagtttggt | cgtttaagggt | 4020 |
| aagagaatag | gttttaaagt | TTTTggTTcg | gttaaaaaag | tgggtgcgta | gatttttggt | 4080 |
| aatgtttagg | attttttgtt | ttgtgatatt | ttgagataag | TTaacgtttt | gtaggacgtt | 4140 |
| tatatgttcg | ggtagtattt | TTTTtagtaa | tatttttatg | tattgggtata | taaagttttt | 4200 |
| TTtattTTtag | tCGcgatttt | TTaaggTTaa | gaggcggttag | agttcagaggt | ttgtacgagt | 4260 |
| agtttttttt | TTaggagtga | aggaggttac | gggtaagtcg | TTTTgacgta | gacgtttttat | 4320 |
| tagggtcgcg | cgttcgtcgt | tcgttatata | tcgttcgttag | tattcgtgtt | tagtttcgta | 4380 |
| gtggcgTTtg | acgtcgcgtt | cgcggttagt | tacgatgagg | cggcgataga | ttaggtatag | 4440 |
| ggTTTTatcg | TTTTtcggag | gttttattat | taaataacgt | tgggtttatt | cgggtcggaa | 4500 |
| aattagagtt | tcgtcgattt | ttattttgtt | TTTTttgggc | gttatttata | TTTTgcggga | 4560 |
| ggttataaga | gtagggttaa | cgttagaaaag | gtcgtaaagg | gagaggagga | gtttgagaag | 4620 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| cgtaaagtat | ttttttcgtt | ttgcgttaga | ttatttttagt | agaggatat | aagttcgggt | 4680 |
| tcgggtatttt | tgttttttatt | ggttgatatt | ttcgtatttt | tcgagttttt | aaaaacgaat | 4740 |
| taataaggaa | agcggatagc | gatttttaac | gcgtaagcgt | atattttttt | aggtagcggg | 4800 |
| tagtagtcgt | tttagggagg | gacgaagaga | tttagtaatt | tatagagttg | agaaatttga | 4860 |
| ttggtattta | agttgtttta | ttaatagttg | tcgttgaaag | gtgggggttg | atggcgtaag | 4920 |
| ttatagttga | aggaagaacg | tgagtacgag | gtattgaggt | gattgggtga | aggatttttc | 4980 |
| gttgagtatt | tagacgtttt | tttggttttt | ttggcgttta | aatgtcgttc | gtggtagggg | 5040 |
| ttattcggcg | gttggacgag | atagtgggtga | atcgtatcgc | ggcgggggaa | gttatttagc | 5100 |
| ggttagttaa | tgttattaaa | gagatgattg | agaattggta | cggagggagt | cgagtcgggt | 5160 |
| ttatttaagg | gttacgattt | aacgggtcgc | gttatttaat | ggcgcggata | cgtttttttg | 5220 |
| ttcgggtaga | ggtatgtata | gcgtatgttt | ataacggcgg | aggtcgtcgg | gttttttgac | 5280 |
| gtgttagtta | ggtttttttt | tttttcgtag | atcgtgtggt | tttttatcgt | tttttttcga | 5340 |
| gatttttttaa | gggttggttg | gagtgttaagt | ggaggaatat | acgtagtgtt | gttttaattg | 5400 |
| tatcgttaat | taagtaaggga | agttatttaa | tttaaaatta | tgtagttaga | atatgcgaag | 5460 |
| ttaaaagatg | tataaaagtt | taagatgggg | agaaaaattt | tttttttagag | ggtattgtgt | 5520 |
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| ttatttttgag | ttttttttta | aataaatcgt | ttgtagtttt | aggataggtt | gatgtatttt | 5640 |
| gggtttgatt | tttgattatt | ttattgttaa | attagtgttt | tttttttagtg | tttttttggt | 5700 |
| ttttattttcg | gaggaggtat | ttcgaagata | ttagatttta | tgggttattt | ttggattttg | 5760 |
| aagttttata | ttgtgataaa | aaatgtgaag | ggaagagatt | tgaaatatgt | ggaaggaaaa | 5820 |
| tgagtgttag | attataaatt | tttaaaaaga | taagtttaaa | atataattta | acgttatgtt | 5880 |
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| ttgttaata | ttagtatttt | ggaggttaag | gtagtaggag | gattgtttga | ggttaggagt | 5100 |
| ttaaaattag | tttgagtaat | atagttagat | tttttatatt | tattaaaaaa | taataaaaaa | 5160 |
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| ttaggttata | ttatgtagtt | tagatgggta | atagggtata | ttatttaggt | ttgtgaaaaat | 5460 |
| atattttatg | atgtttgtat | aatgataaaa | ttgttttagtg | attttatttt | tagaatatat | 5520 |
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| gggaattatt tgaatttgcg aggcgaaggt tgtagttagt cgagattgta ttattgtatt | 6420 |
| ttagtttggg tgatagagta agattttgtt ttaaaaaaaaa aaaaaaatt cgtttttttg | 6480 |
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<220>

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<221> unsure

<222> (223, 366)

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| aatgtttt | tgggtgagg | attaaggatg | agaagaatgt | tttttgtttt | ttatgtcgtg | 120 |
| ataatata | aaataaaaaa | tttcgaggga | atatatat | tatatataat | atagattatt | 180 |
| ttagggagta | aataaattat | gtgtgggggt | gggtaattag | ttnaagtcga | agcgtaaata | 240 |
| aatgtgaat | atacgtttgc | gggttatata | tagtgtattt | ttattagtat | ttagaaaaaa | 300 |
| ttgtgagta | gtgaattagg | aaattaatgt | ttggaaggta | gttaaatttt | aattagttta | 360 |
| agattntttt | ttttttttta | aaaaaggtag | ggaagtaata | tttttttttt | tttttttgat | 420 |
| tagaatcgat | gtattttttg | tgtatgatcg | tatttttaat | aataaaaagg | gaaagaggat | 480 |
| ttggaagga | attaaacggt | cggtttggtc | ggggaggaaa | gagttaacgg | ttttttttat | 540 |
| aagggttttt | gttgattttt | tcggttcggt | ttataagttt | tttatttggt | tttttttagga | 600 |
| agttcgggtt | cgcggttcgg | gtattttttg | ttttttttat | attttttcgt | ttagtatttt | 660 |
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| gggatttggt | ttttttgaaa | tttggttgag | aaattgggaa | tttcgtgtgg | gaggcgtggg | 780 |
| ggtgggacgg | tggggtatag | attggtagag | agtaggtaat | ttttttttcg | tttttagttta | 840 |
| gttttggaat | aggtagatat | attttagggt | taaaatagacg | tttttcgtac | gggggttttac | 900 |
| ggaagtttga | gtaggcgggg | taggaggggtc | ggtatttggt | gttttggtag | taaattgggg | 960 |
| gatttagttt | gggtggaagg | tatttaattt | agatagttgt | gtatatataa | tgtataatat | 1020 |
| atgatttttt | ttaataaatg | taatgggagt | ttatttataa | cgcgtttttt | aagtatacgt | 1080 |
| ggtaatgcgt | tggtgggtta | ttttaattat | tttaggtatc | gttttttttt | ttatgttttt | 1140 |
| attatttttt | tttattttata | ttaatatattt | acgttttgaa | cgcgcggtta | ttaatatattt | 1200 |
| tttttttttt | attttttttg | ggatttttga | ttaaagcgcg | gttttttttt | tagtttttagc | 1260 |
| ggcgtttt | gtagtttggt | acgcgcgtgg | cgtggcggtg | ggcgcgtagt | gcgttttcgg | 1320 |
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| agtttagagt | ttcggttggt | cggttgagtt | ttttttttat | ttttttttat | ttttttattt | 1560 |
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| gatttttcgag | ttgtgttggt | cgcggtcggt | atcggtcggt | ttcggtcggt | tttggttttt | 1740 |
| tttttggttc | gagaagggtta | gggtttttta | gaggtttggt | gggaaaaaga | acggaggagg | 1800 |
| ggatcgcggt | gagtataaaa | gtcggttttc | gggtttttat | ttaattcggt | gtagtaattt | 1860 |
| tagcgagagg | tagagggagc | gagcgggcgg | tcggttaggg | tgaagagtc | gggcgagtag | 1920 |
| agttgcgttg | tgggcgtttt | gggaaggag | atfcgagcgg | aatagggggt | ttcggttttg | 1980 |
| gttttagttt | ttcggttgatt | ttttaattag | cggttcgtaa | tttttgctgt | atttacgaaa | 2040 |
| ttttgtttat | agtagcgggc | ggatattttg | tattggaatt | tataatattc | gagtaaagac | 2100 |
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| atcggggtaa | agtgtttgt | taagatggta | gaggagaagg | tagagggaaa | acgggaatgg | 2460 |
| tttttaagat | tatttttttcg | agatttttgt | tttatgaata | tatttacgtt | gatttttcggt | 2520 |
| cggtcggata | tttttggttt | attgtgttaa | ttgttttttg | cgttttgggg | ggttgggggg | 2580 |
| tgttttgcgg | tgggtagaaa | gttttttgta | ttttgagttt | tttgagtag | ggatcgata | 2640 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| tcgtttgtgt | gagttagatc | gtttcgtagt | cgttgatttg | ttttcgtttt | cgaggaggta | 2700 |
| tttaaatctc | ggtttatcgt | atttttgata | gtcggagacg | gatattgcgg | cgcgtttcgt | 2760 |
| tcgtttgttt | tcgcggcgat | tgtaattcgt | tttgattttt | ttaagaagtt | ggtatttggt | 2820 |
| tttttaaaaa | ataataatat | aattttaaat | ttgggttttt | agaggtgtta | ggacgtgggt | 2880 |
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<210> 201

<211> 2891

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<220>

<221> unsure

<222> (2526, 2669)

<223> unknown base

<400> 201

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| ttttttaaaa | agttaaatgt | taatttttta | aaaggattag | ggcgggttgt | aatcgtcgcg | 120 |
| gggataggcg | ggcgggacgc | gtcgtagtgt | tcgttttcgg | ttgttagaaa | tcgggtgagt | 180 |
| cgaaatttaa | atgttttttc | ggagacgggg | ataagtttag | ggttgccggg | cgatttggtt | 240 |
| tatataggcg | atatgcggtt | tttattttta | ggagtttagg | atgttaaggg | ttttttgttt | 300 |
| atcgtaaagt | aattttttag | tttttaaaac | gtagagagta | attaatataa | ttaaagtagga | 360 |
| atgttcgac | ggtcgggagt | tagcgtgaat | atattttata | ggtagaaatt | tcgaaagggt | 420 |
| agtttttaaa | attatttttc | tttttttttt | gttttttttt | ttgttatttt | gataagttat | 480 |
| tttatttcga | tttagttttg | gattattttt | tatttttagt | tttaattatta | taattatttt | 540 |
| gagaaaagtg | tttaatacgt | aggaatggga | gaaaagatat | tttatttagg | tattcgattt | 600 |
| attttagtat | taaagtata | aaaaataaaa | ttaaaaggta | agtggatttc | ggtgtttatt | 660 |
| tggtttttta | ttcgaaaaaa | attttagcgt | taagtagttg | taaggagagt | tttttagaga | 720 |
| agcgggtttt | ggtagcggcg | gggaagtgtt | tttaaatggg | tagaatagtt | ttttcgcgtc | 780 |
| gggagagtcg | cgtttttggt | cggtgttgtt | aagttttagt | gtaaagtgtt | cgttcgttgt | 840 |
| tatggataaa | gtttcgtgga | tgcgataagg | gttgcggtac | gttggttggg | ggattagcgg | 900 |
| gagggttggg | ttagaggcga | agttttttat | tcgtttcgga | tttttttttt | taggacgttt | 960 |
| atagcgtagt | tttgttcgtt | cggttttttt | attttagtcg | gtcgttcgtt | cgtttttttt | 1020 |
| gtttttcgtt | ggaattatta | tagcaggtta | gataaagttt | cgaaaatcgg | tttttatatt | 1080 |
| tagcgcgatt | tttttttttc | tttttttttt | cgtaaagttt | ttgagaagtt | ttgttttttt | 1140 |
| aggttagga | ggggagttag | ggacgggtcg | gggtcggcgg | tggcgggtcg | gagtagtata | 1200 |
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| ggaggaatga | tagaggtata | aggaggaaaa | cgatgtttag | aatgattaaa | ataatttagt | 1800 |
| aacgtattgt | tacgtatat | tggagagcgc | gttatgaata | aattttttat | gtatttggtg | 1860 |
| gggggagtta | tgtattatgt | attatgtatg | tatagttatt | tggattggat | atttttttat | 1920 |
| tagattgagt | tttttaattt | gttggttaag | tagtagatat | cggttttttt | gtttcgtttg | 1980 |
| tttaggtttt | cgtgggggtt | cgtgcgggag | gcgtttgttt | agttttgaga | tgtgtttgtt | 2040 |
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| agataaaatt | tttttcggtt | ttgtggcgct | ggtttgtaat | agtttcgggt | tgtcgggttt | 2220 |
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| | | | | | | |
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| gggggnagtt | ttgagttaat | taaaatttgg | ttgtttttta | ggtattaatt | ttttagttta | 2580 |
| ttgatttata | atTTTTTTTg | aatatttagt | aaagtgtatt | gtatgtaatt | cgtaaacgtg | 2640 |
| tatttatatt | ttatttacgt | ttcgattttna | gttagttgtt | tagttttata | tatgatttgt | 2700 |
| ttgttttttg | aaatgattta | tatttaatat | ataatgtata | ttttttcggg | atTTTTTatt | 2760 |
| ttgtgttatt | ttacggtatg | aaaaataaaa | aatatttttt | ttatttttgg | ttttttattt | 2820 |
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<211> 3291

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 202

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| gttatataat | ggataatttaa | taatatgtgg | attttcgggt | gattttttgt | agtttgggtg | 120 |
| gtgaggtt | aggattttgt | tgtttttggt | aggatttaga | gttattgtta | ttgttgtttt | 180 |
| gatgtaga | ttttattgaa | tgaataaata | taggtgggtt | ttatggagta | aagcgagggtg | 240 |
| agtaatttat | gaagggagat | ttttagtatt | attattagta | gtagagaagt | gaagaagtta | 300 |
| ggattttaat | agagtttttt | gagttttgtg | ggaagggagg | attttttagg | gtttagaacg | 360 |
| gttagttaga | atgtttttta | gaagttagtg | ggaaaggtat | aaagattatt | tttgtttaaa | 420 |
| tttttggttt | ttaggagggg | agatttaggt | agggatgtat | ggttaacgga | gatttttagt | 480 |
| tagagtgttg | agaggattgt | gtgaattgta | gatttaggaa | gagggtgaga | gatttttatg | 540 |
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| ttgttttttt | ttgttttttag | tttttttagt | gaggtttag | gaaagagata | tagttaagggt | 660 |
| ttggagattc | gtggtatttc | gttaggggat | ggtattatag | atgagttgta | agtttgcggg | 720 |
| atatagtatt | taattttgaa | agttttttgt | tGgaataatt | ttatattatc | gtttgaggggt | 780 |
| ttttatattt | ttgggttttt | tagattgtta | tttttattat | aattatttta | agaaattatt | 840 |
| gttattttta | aattttataat | tggaaattga | ggtttaggaa | ggagatatga | tttttataaa | 900 |
| attatatagt | tgggaaattt | tggagtttgt | atttaattgg | tttgtaaatac | gtattttcgg | 960 |
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| tattacggat | aaatagttta | gggcgttttg | cgagaagtta | ggggtgagga | agttttgggg | 1980 |
| cgttgtcgtc | gtttttttta | attataaatt | aggtcggata | ggagagggag | gggtggggga | 2040 |
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| ttttttatgc | gtcggggttcg | ttgttttcgg | gtcgcggcgg | cgagtattat | agcggcgatt | 2760 |
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| tatttttaaa | atgtaaattt | gcgttttttg | gtgattgttc | gttttttggt | tggttttgta | 3120 |
| tggtgtagat | tttatttttt | atttattcgt | aattattttt | cgaattagga | taggtttggg | 3180 |
| ttcggaatta | gagtttttag | ttagagttag | ggagggggcg | gttataggaa | ttggtgttcg | 3240 |
| ggtttcgagt | cgtttcgcgg | gtttgattta | gtcgtttttg | ttgtttgtag | a | 3291 |

<210> 203

<211> 3291

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 203

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ttgtaaata | gtaaggcgga | ttgagtttag | ttcgcgggac | ggttcgaggt | tcgaatatta | 60 |
| attttttag | tcgttttttt | tttaatttta | gtttaagggt | ttagtttcgg | gttttagattt | 120 |
| gttttggttc | ggggggtaat | tacgggtggg | taggagatga | ggtttgtaat | atgtagggtt | 180 |
| aaattaaggg | cggatagtta | ttaaggggcg | taaattttata | ttttggaagt | agggataagt | 240 |
| agagaaaaag | attttttacgt | tcgcgttgta | gtgttttaaat | agcgttttta | atggggtagt | 300 |
| tcgaacgttt | gttcgtatat | ttttaaaata | gtttattttta | gtgatagttg | tttaggataa | 360 |
| gggggttttt | tttttcggga | aggatttttg | tttaaatttt | tcgtaagggt | agtttttcgt | 420 |
| tttcggaaac | gcgtttttga | tatttcgagc | gtcgttttaa | tttttttatt | ttttgggggt | 480 |
| tcggttttat | tatgtcgtcg | gagtagttgg | agcgcggggt | ggacgcgtcg | gagtcgtcgt | 540 |
| tgtagtggtc | gtcgtcgcgg | ttcgggggta | gcgggttcgg | cgtatagaag | gcgggtgcgg | 600 |
| cgtagggggg | cgcggcggtt | tggtcgcgta | gtagagtttg | taggttttcg | atatagcgga | 660 |
| tggcgttgcg | taggattttt | attttgggta | atcgttggtt | tggattgttc | gacgtgtagc | 720 |
| gtttgagttg | tttaaagggt | ttatbtattt | tgtttaggcg | gcgtcgttcg | cgtatggtgg | 780 |
| cggttttgcg | gcggtcggcg | ttggtggttt | tgcgtttgta | cgttttgtag | gtttatagta | 840 |
| ggtagcgggt | cgtttggtgg | tgttcgttgg | gcgcgcgtat | atgttcgttt | ttacgtgcgt | 900 |
| tcggggtcgg | gtgtatcgtc | gcgggggaagt | gcgagtggtt | ttcgggtttt | aggagcgcgt | 960 |
| ttacgtgtat | taggcgcggg | tttaggtttt | cgaagaagcg | taggttcggg | gagtcgaaat | 1020 |
| acgggtcgtt | atagaagtgc | ttcgtttgtg | taaaggagta | gagagagtcg | tcgggggtcg | 1080 |
| ttaggtttac | gtcgcgggag | ggtggcgata | gtagttttat | attttggcgg | tggcgcggta | 1140 |
| gtttttggt | ttcgtttaat | ttaagcggta | gagagtggtc | ggaatttttt | gtcgttcggg | 1200 |
| gttttcggtt | gtagatagta | aagtgttggt | agtttgaatg | tttattttatt | gtttttttatt | 1260 |
| tttttttttt | ttgttcgggt | tgattttgtg | tttaaggaaag | cggcggtagc | gttttagggg | 1320 |
| tttttttatt | ttagtttttc | gttaggcggt | ttgggttatt | tattcgtagt | agtttaaacc | 1380 |
| tttcggaggt | taggcgggta | gttgggggag | ggggagttcg | aggttaatag | gaatattgcg | 1440 |
| gggcgggggt | tggggggggt | tttcgggggt | gtcgtagggg | ttcgtagatt | ggttaggttag | 1500 |
| ttcgtttttt | tatatggcg | tgccgcgttag | gtttttttatc | gggtaggag | ggagggagcg | 1560 |
| atcggtagtt | ttaggcgggt | gtattttggt | tttcggtacg | tttttttttaa | atttttttaa | 1620 |
| tattcgattg | ttgtattcgc | gggaaacggt | ggttgccgcg | gtttatttttt | gagttgattt | 1680 |
| ttaatatttt | tttgtttttt | gattttgtgg | ggattttatg | gtagagcggt | tgtagaaatt | 1740 |
| aggtcgtgag | agattttggag | agaggttaagg | tattgggggt | atagagttga | ggagttagat | 1800 |
| cgtgaaagag | ggatcgaaag | aggttgagag | atacgtagaa | agtagaaagt | ttagagcggt | 1860 |
| aggggtagag | aaacgtacga | gtgtaataat | aggcggagag | atttcgagag | ttgaagtggg | 1920 |
| cgagttcgag | ataaacgggt | cgtagagggt | ttgatatttc | gttagttttc | gatttgggag | 1980 |
| ttgttttagta | ggtcgtgggt | ttagtttttt | tttttttagac | gttttagaaat | ttagttatgg | 2040 |
| ttgtatagga | atcggagatt | gttggttaaa | tttcgcgtta | atttttttaa | attcggattt | 2100 |
| tgtttaggtt | aggaattttt | tttatttttaa | tttgtacgtt | tttatagtag | gggtgttttag | 2160 |
| tgttatgttt | gggggttttag | ttgagttggt | tttttagttg | ggaagaaaat | ttttttgttc | 2220 |
| gggggtttggt | ttcgtttttat | tcgcgggtgtt | gagtttaagga | aagtgtattt | cgtaaagggtg | 2280 |
| ttaaatttta | ggattttggt | tgagaatttg | attttatttt | atttgaagtt | ttcgagagt | 2340 |
| cggtttgtag | attagttgag | tgtagatttt | agagtttttt | aattgtgtga | ttttgtggaa | 2400 |
| gttatgtttt | ttttttgagt | tttagttttt | agttatagat | ttggggatga | tagtaatttt | 2460 |
| ttggagtaat | tgtggtgggg | atgatagttt | gaagagatta | aggatatgga | agtttttagg | 2520 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| cggtgatgta | gggttattcg | agtaaggggt | ttttagagtt | ggatggttg | tttcgtaggt | 2580 |
| ttataattta | tttgtggat | tatgttttga | cggagtgtta | cgagttttta | ggttttagtt | 2640 |
| gtgttttttt | ttttagtatt | tattggaaag | gttggaata | ggaggaggta | attattttat | 2700 |
| gggatgtggg | atatttggtt | tttatataag | ttttagtata | tcggttattt | ttatgggggt | 2760 |
| tttttagttt | ttttttgaat | ttgtagttaa | tatagttttt | ttagtatttt | ggtaggaat | 2820 |
| tttcggttgt | tatatatttt | tggttggttt | tttttttttg | gaaattagaa | atttaagtag | 2880 |
| gagtgttttt | tgtgtttttt | ttattaattt | ttggaaggta | ttttagtgtg | tcgttttggg | 2940 |
| ttttaagaag | tttttttttt | ttataaaatt | tagagggttt | tgttggggtt | ttattttttt | 3000 |
| tatttttttt | ttgttggtag | tggtgttgaa | ggtttttttt | tatgaagtat | ttatttcggt | 3060 |
| ttattttata | gggtttattt | gtatttggtt | atttagtaaa | gtttatatta | tggagtagta | 3120 |
| gtgatagtaa | ttttaaattt | tggtagaggt | agtaaagttt | tggttttatt | ttatttaagt | 3180 |
| tgtagggggg | tattcggaaa | tttatataat | gttaggtatt | tattatgtgg | taggtattag | 3240 |
| tttaagtgtg | gggttagagt | aatgaataaa | attaagattt | tgtttatatg | g | 3291 |

<210> 204

<211> 1092

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 204

| | | | | | | |
|------------|-------------|-------------|------------|-------------|-------------|------|
| aagttttttt | tttattattt | aagaagggtat | ttaggttttt | ttgtgttagg | ttttaggttaa | 60 |
| agtgttgat | tatttagtaa | ttgggttttag | tagtaggatg | gttttagatt | gaggtttttag | 120 |
| ggttaaagga | ttattttttt | ttttagcggt | ggttcgggaa | aggtaagttt | cgggcgggag | 180 |
| cgtacgtcgc | gttttcgaag | tttggttttt | tcgttacgtt | tattttttgt | ttttatttcg | 240 |
| cgttttttta | gttttttttt | cggtgaatcg | gatgttttgt | tagtttttta | ttttgcgttt | 300 |
| tcggtcgcgg | ttcgggtttt | tcgtaaagtc | gttggtattt | cggagggttt | agttagcggg | 360 |
| ttttcggagg | ttggtcgggt | aggcgtgggt | cgcggtagga | gttgggcgcg | tacggttatc | 420 |
| gcgcgtggag | gagatattgt | tttgtcgcga | tgggggttcg | gggcgttttt | ttacgtcgta | 480 |
| ggtaagcggg | gcggcgggtg | cggtatttgt | ttatcgggag | tttttttttt | ttttttttgt | 540 |
| tgttgttgtt | ttgtatttag | ttcgggggag | gatagaagaa | aaaggaggta | gaatggattt | 600 |
| tttttggttt | tttttgttgt | cgggggcggg | ttagggtggg | tcgcgttgtt | taggtagtgt | 660 |
| tgtcgtgttg | ttaggtagtt | tggtcgtcgg | cgtgggcgat | gtcggcgttg | gggcgggagt | 720 |
| cgcgagggtg | ggaggttttg | gggcgttttc | gggacgtgga | gttagtaggg | ttttgatttg | 780 |
| aaaaacgcag | gttaaagcgtg | tttttgattg | tttttgagta | ttttatattt | tttagattta | 840 |
| gggcgttttt | atttttagtt | ggaagtttag | tttagagtaa | tgggtgttatt | aaaaggggtg | 900 |
| tgttggttgt | gaaaatatatt | tttggaagta | tttataagtt | tgtaggaaat | atgttttttt | 960 |
| ttttttttta | ttttgttttt | tttattattt | attttaagaa | gtaatagaat | ttgtgtagag | 1020 |
| gtgttttaa | gttatattgt | atgtttattt | ttgtttatgt | tgaattcggg | gtatatttgt | 1080 |
| gagaataagt | tt | | | | | 1092 |

<210> 205

<211> 1092

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 205

| | | | | | | |
|-------------|------------|------------|------------|-------------|-------------|-----|
| aagttttattt | ttataagtat | atatcgagtt | taatataaat | aaaaataaat | atatagtgtta | 60 |
| attttaaata | tattttgtat | aggtttttgt | gttttttgaa | atgggtaatg | aagggttag | 120 |
| agtaagaaaa | taaggaaaat | atattttttg | taggtttata | aatattttta | aagggtattt | 180 |
| ttatatattaa | tatatatttt | ttagtggtat | tattgtttta | agttgggttt | ttagttggga | 240 |
| ataaaggcgt | tttgggtttg | aaaggtgtga | ggtgtttaga | agtagttaag | aatacgtttt | 300 |
| gtcgtcgttt | tttaagttag | aattttggtt | attttacgtt | tcggaaacgt | tttagggttt | 360 |
| tttatttttcg | cggttttcgt | tttagcgtcg | gtatcgttta | cgtcggcgat | taggttggtt | 420 |
| agtaatacgg | tagggttgtt | tgggtaacgc | ggtttatttt | gggtcgtttt | cgattatagg | 480 |
| ggaaggttaa | ggggatttat | tttatttttt | tttttttttg | tttttttttcg | agttggatgt | 540 |

| | | | | | | |
|------------|------------|------------|------------|-------------|------------|------|
| agagtagtag | tagtaggaga | aggaagggaa | agttttcggg | gggtaggtat | cgtagtcgtc | 600 |
| gtttcgtttg | tttacggcgt | gaaggagcgt | ttcgggtttt | tatcgcggtg | gggtagtggt | 660 |
| ttttttacgc | gcggtagtcg | tgcgcgttta | gtttttatcg | cgtattacgt | ttgttcgggt | 720 |
| agttttcggg | agttcgttgg | ttgggttttt | cgggatggta | gcgggttttc | gagggattcg | 780 |
| ggtcgcgggc | gaggacgtag | agtaggagat | tgatagagta | ttcgggtttat | cgggagaaga | 840 |
| tttggaaggg | cgcgggatgg | gggtaggaag | tgggcgtggc | gagggagtta | ggtttcgggg | 900 |
| gcgcggcgtg | cgttttcggt | cggagtttgt | ttttttcggg | ttagcgttga | ggagaggagt | 960 |
| ggttttttgg | ttttgggatt | ttaatttgag | gttattttgt | tattgaattt | aattattggg | 1020 |
| tagtttagta | ttttatttgg | ggtttagtat | agaaagattt | gaatgttttt | ttggatgatg | 1080 |
| aaggggaagt | tt | | | | | 1092 |

<210> 206

<211> 5203

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 206

| | | | | | | |
|-------------|------------|-------------|-------------|------------|-------------|------|
| gggaattta | acgttttttc | ggggtagaag | ggggtagcgc | gcgcgaggcg | gaaggatagt | 60 |
| tattttcgtt | gtataaattt | tttcgcgggt | cgcgtcgcgc | gtgtaggggt | tggacgttat | 120 |
| tcggcgttag | agtcgggttt | gaggagcggg | gtttggtcgg | gaacgagggt | tgtagttttg | 180 |
| ggtggtgtta | tttggtgttt | tattttttat | tttttttttt | ttcgtgagga | attagaggta | 240 |
| tcgggtcgcg | cgggttgaga | atttttaaat | ttttttcggg | cgtattcggg | tgagttaatt | 300 |
| cgtagttttt | gttagttttt | ttgttttttc | ggtagcgggt | tttttcgtta | gttaggtttg | 360 |
| gaagtatttt | tttgtgagat | tgggttagga | agtgcgaaa | agcgtcgaat | tgtttttaaa | 420 |
| ttgaaaatat | tttttttttt | ttttttggag | atagcgttga | taaatatatg | ggatttcggg | 480 |
| ttttgatttt | tggttgtcgt | ttttgttttt | ttgtcgttaa | taaaattcgt | attgagtttt | 540 |
| ttagtgtttt | gattaatagg | tagattaatt | tttattgggg | ttgggaatag | tttgttttta | 600 |
| ttaatgttat | tttaaaagtt | cgttaggatg | cgttttagtt | cggttttttg | gatgtttgag | 660 |
| cgagttagtt | atgatatttg | tttttttttt | tttttttagt | ttaaattttt | tagtaaagtt | 720 |
| tttagttttc | gtttgtttgt | tttttaggtt | ataacgggat | aaatcgtagg | atcgggtcgt | 780 |
| tggttttttag | aataggttag | ggtttagaga | ggggatattt | agggagaagg | gattgagggt | 840 |
| gttttgattt | gtttgttttt | tttttgaaat | tgaatttttt | ttttttgggg | gtagagggtta | 900 |
| tagggaaaag | agagatgggg | ggatcgtaat | aggggtgatg | aatggaaaag | aaattttttt | 960 |
| aggaatttta | tttgtaaaaa | tcggagagtg | tcgttgattt | tagttgtttt | atatgttagg | 1020 |
| agttttaaat | ttaatttttt | tttgataaat | agtatggagg | gattgggagg | taaagttttg | 1080 |
| ggagtttgat | tcgttggggt | gttaggaatt | tttttggttg | gagattttat | tggataatgt | 1140 |
| atttttaaa | gtattttggg | ggtgggtagg | gagaagatag | agagagaaa | agagagagag | 1200 |
| agagagagag | agagagagag | agagagatag | gttggttttt | tagagcgaac | ggaagaggat | 1260 |
| cgaggattga | atttagggag | tttttagtat | tggttatttg | gtaggaggcg | aggaaagggc | 1320 |
| agggtatcgc | ggtttttttt | taagttaggt | agtggttata | gtttgaaggt | gttacggggc | 1380 |
| ggtttttgga | tttttttggt | tttttttagg | tttggtttcg | gcgagggttg | cgggttagcg | 1440 |
| ggaatcggta | ggttgttgga | gaagggagag | ggataaagg | ttggaagtgg | gggaggtatt | 1500 |
| agggtattgg | cggtcgggat | gggagttttt | gttttttagg | tttattggat | tcgtttgtta | 1560 |
| gtttcgcgga | taagggattt | tattttttta | gggtttgtta | aaagagagac | gtttggggta | 1620 |
| ttataaagtg | acgtaggtgt | ttgttaagat | tttttttttt | taaaaaatgt | tagtttttat | 1680 |
| tttttttagc | gcgtcggcgt | tcgttttttg | tttgatcggg | gaaagagaga | gtttggaggt | 1740 |
| gttagaattg | ttagaatttc | ggatgggagg | tttttggttt | tgaagtggg | agttggaggt | 1800 |
| attttttttt | agaagtgggt | atttttttgt | tttttcgaag | gtttgatggg | gtgggtatag | 1860 |
| gggaatggtt | gggatcgggt | cgggtgagat | gtttgtttta | ttttatgttg | acgtattaat | 1920 |
| atttggttaga | agttttgggt | aggtttttgc | gagttacggt | tttttagcgg | gatttttttt | 1980 |
| acgtagatag | tttcgtttat | gggtgggacg | atttcggcgg | ttttcgcggg | aacgtattcg | 2040 |
| tcgggtttgag | agggtttttt | tttggttata | gggggcggag | ggtagggggg | aataggggtt | 2100 |
| tgtggggagg | cggggaaagg | agatagaatt | taaaagcgtta | ttttcgtcgt | tttttcgcgt | 2160 |
| tttgaggagg | agtaagtggg | tttcgggcgt | gttggttagtc | gtatttaaaa | tggcgatttg | 2220 |
| cgagttgttt | cggttttgtt | tatatatttt | gtaatcgcgt | tcgtatttta | gtttcgggtt | 2280 |
| ttatatattt | aggtcgtttc | gttttttagag | tcggtatttg | gtagagggag | tgaggttttt | 2340 |
| tacgaggtag | aatagttatt | ttattttttt | tgagattagt | ttagagagaa | cgaggaaatt | 2400 |
| ttattttttt | tttttttttt | ttaaattttg | aaaattcggg | tttatttttg | ggttgaattt | 2460 |
| ttttttttta | atattgatat | atgggaagta | gttaagtttt | ttttgttttt | tgtttgtgcg | 2520 |

| | | | | | | |
|-------------|--------------|-------------|-------------|-------------|-------------|------|
| gaggagtttt | taggagtttt | tttcggagtt | ttttttttta | tttaatgacg | ttagtggtat | 2580 |
| ttatttttctg | ttttttgttt | tttttgattt | tttgttaaaa | ttttttttctg | tagcgagatg | 2640 |
| ggggttgagg | gggtgggaga | aggagttgat | ttaaagagtt | agtgttttgg | ggggaaatag | 2700 |
| taataagatt | acggttggtt | tttttcgagg | taaagttaa | gaaggtgta | atttattcgg | 2760 |
| tcgttaattg | agaggttgta | aaaatgatat | tcgttttttag | ttcggataga | attatttttt | 2820 |
| tttttttctg | tttttcgtaa | gtttttcgtt | tatgtatagc | ggatttgagt | tttgagttta | 2880 |
| agttttttta | atgttcgttt | ggaaagtaaa | aggagagaga | aagagaaagt | cgattttcgt | 2940 |
| tggtttggga | tttagggctg | cggttttatt | tgctcggtatt | tttcgaaagt | cgcgtttttg | 3000 |
| cgaaatgaaa | tttcgttttag | gaggtcgcgg | atttgatat | tcggcggtat | tttttttatt | 3060 |
| tttgatttag | gttttttttctc | ggcgttgcca | gttttcgggg | aagggttaga | gtcggtagtt | 3120 |
| tttttttagtt | cggggagggg | agagggttat | gcgattttat | ttttggtttag | ggtcggggag | 3180 |
| gtttttgttt | ttcgggagtt | ttgttcgggt | tttttggtcg | tagggttgtt | gggttttagg | 3240 |
| taggaacgag | aggggtgaggt | ttatatgtgg | ttcggcggtt | tagggcggtt | tgtagcgttt | 3300 |
| ttattgtttc | ggttggttagg | ggttgccggc | acgcggttag | ttagtagcga | gtttaggtcg | 3360 |
| cgtagatttt | attgatgagt | tttgattttt | agtatttttt | ttaaagtaag | aagagtttag | 3420 |
| cgtatttttt | ggttggtttta | tttttagttt | tttggttttag | tttttttagtt | ttattttttt | 3480 |
| tcgttttgtt | ttgggggtgtg | tatagtagtt | taggtttttt | tttttttttt | cggtttcgtg | 3540 |
| gttcgaagtc | gtcgagagag | ttcgggatag | cgtaggatta | ggtagtcgtt | cgtttttttg | 3600 |
| ttattttaat | tgtaggtttc | gaggggcgtt | tttgaggtgt | attgaggtgt | gttttaatcg | 3660 |
| tgccgtattt | aataaatgga | tttttggtgt | gtgggttagaa | gagaaaagtt | atttatttat | 3720 |
| tttttttttc | ggttttttgg | taatagttga | aggggagttg | ttttcgtgga | ttgagtagat | 3780 |
| aggagagg | gagtcgtggt | gcggagatat | acgtattata | tatagatgat | cggtggtata | 3840 |
| cacgatatac | gttgatatac | cgatatacgt | agtgggatat | atatatatat | atatatatat | 3900 |
| atatatatat | atatagagag | agagagagaa | tttttttttag | tattggttat | tcgttttttt | 3960 |
| atttaggttt | ttattttttt | ttttttttta | tttttttttg | tttttttttt | tttcgggcgt | 4020 |
| tgcgaaaagt | agtcgtattt | agttaataaa | tggtacgtgg | gagaagttgg | tgagtgtttg | 4080 |
| gtgaggattt | tttagggttt | tttataagaa | ttttttgtat | ataaagtaag | tgccgtgttt | 4140 |
| attcgggttt | tttttagttag | agttgtgttt | ttgtttcgtt | gcgtatcgcg | gttttcgaaa | 4200 |
| ggagaaagga | gagaagaaag | ggcggggaga | gcgggggtgga | ggatttggtat | aggttttgga | 4260 |
| ggtttggggt | ggggagggtt | ttggtttcgt | ttagttttcg | gttcggtaat | tttttttcgg | 4320 |
| tttaggtttc | gtcgcgggtt | tcgtagttgg | aatggagttg | ttaggattta | gtgacgtttt | 4380 |
| cgtttttttt | tttttttttt | aaggggttag | gtgggttggg | gtgcggtcgt | cgttggtttt | 4440 |
| tgtgtttttg | ggttttcggt | gggatggggt | gggggcgggc | gggggcgggg | cggtaggtta | 4500 |
| cgttggtttg | gagtttggtta | gaaaggatag | tatagaaatt | tgtatttttc | gaggattggg | 4560 |
| agtttcgagt | ttagtttagg | gggagtgagg | gcgcgatttt | taatttagaa | atttttattt | 4620 |
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| taggtgtgtt | ggttgtagtt | atttttttta | tttatatttt | ttatttttta | tttttttagtc | 5160 |
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<220>

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| ttaagtgtgt | taatgtgtgt | gtgtcggcgt | tcggtttcgt | ttttatcgtt | ttttattggt | 180 |
| ttattagcga | agtttgattt | ttgttattat | tttttagtaa | aatatttttt | tttgcgtttg | 240 |
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| taatatgtaa | atgtatcgtt | cgtttttata | taaaatattg | ttttatgtaa | agtagcgtcg | 360 |
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| tgattggtcg | cgtcgtcgta | gtttttggta | gtcgggtag | tgaggacgtt | gtaagtctgt | 1920 |
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<220>

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| tatatagaaa | taatttagtt | tttgataaat | gaaatgttat | gttttttttg | tttgatgtgt | 360 |
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442
49

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<211> 7110

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<213> Artificial Sequence

<220>

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| ttgtaatttt | tatttgttat | atataatatt | tttgaattta | tatattatta | tttgggatta | 180 |
| gaaattattt | aatatttatt | ttatgtttat | gataagagta | ttgaatatta | aatgttattg | 240 |
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<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

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| tttttgattt | ttttttaagt | ttgtagtttag | gttatttggtg | attaggtgcg | tatttcggta | 180 |
| ttgtgttagt | attagataat | aaaatagtta | atattttttt | tttaaatgg | gttattttat | 240 |
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| ttttttaagt | ttaatagttt | cggttgggtt | taatttgaaa | gttaaataata | atttttggtg | 6000 |
| aatgttttag | tattgagtag | tgagttgcga | attatttttt | agttgattgt | tattgttggt | 6060 |
| ggtattgttt | taatattagt | tttggggaga | tttatttttt | gttatttttat | tttgtttata | 6120 |
| tttttttttt | taaatttaga | tttttttttt | tttttttttt | tttttttttt | ttattttttat | 6180 |
| attttttatt | attttttata | aatttagatt | taagtaatat | atgtttataa | aaatttaaag | 6240 |
| ttttgtttta | aagatataaa | gtgaaaagta | aaagtgtttt | atatgtattt | attaaatggt | 6300 |
| gaatatttat | tatgtgttag | gtattttaat | tggtgtttgg | tatagatttg | tatatttttt | 6360 |
| tgggattgtg | tgggggggtg | ttgtttgttg | ttattatatt | agtatgggtt | tatgatatat | 6420 |
| attgttttgt | aatattttta | aatttagtaa | tattttttga | atattttttt | aaaataaa | 6478 |

<210> 214

<211> 2534

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 214

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| ttgatgggtat | gtggtttgga | gagggtaggt | gatttggcgt | ggagggttag | agggtaaatt | 120 |
| tttaataaag | tggtaatagg | ttattaattt | gaaagggaaa | attgtgtagt | gatgggaaat | 180 |
| gtgtttaata | aatttatagg | gtgattaatt | ataaagggtt | ggttggagtt | ttagaggttg | 240 |
| tttgttaaat | attttattaa | gcggtatttt | gaaagtgtgt | atttgcgtat | tttgggagtt | 300 |
| tagaggggat | tttggggggg | aatgaggttt | ggaggatgga | attattttta | ggtagattga | 360 |
| gaaggagttt | ggattttatt | tttaaatata | gtttggagtt | tataggttag | aggttttaat | 420 |
| gggagaaaag | ttaaaggaag | aggggttaga | aaggagtttt | aggggaattg | tggttatgtg | 480 |
| attttgagta | aattttat | ttttttgaga | tttagtggtt | ttatttttat | ggttttgtgt | 540 |
| gtgttataga | gatatggttg | ggattaaatt | cgatcgtgat | atgaaagtgt | ttgggaaatt | 600 |
| ttatggtttt | atttaaatat | gagttatttt | tatttgaatt | aaggggggaa | gttatttggt | 660 |
| aggattagga | attttatttt | tttgaatttt | tatgggtttt | gtcagaggtg | aagtagttag | 720 |
| gggttaaagt | tagtttttag | tttttggaag | ggtattgtga | aagtggattt | gatttgagaa | 780 |
| gtcgtttttt | gatgtgggta | gttatgtgat | gttagtttcg | aataagaggg | ggtagtttgg | 840 |
| agtttgga | ggtgttagtg | taggtggggt | ttacgtttag | attttttttg | ttgattgttt | 900 |
| gatgattta | tttttatatt | ttagtttttt | tatttttatt | gtagagtcgg | aaagggtgtg | 960 |
| ggaagagag | gagaggagag | taggttttgg | gttttggttt | cgttttttgt | ttttttttat | 1020 |
| ttttttttgg | gttttggttat | ttagttaaaa | ggtaggttaa | gagtaggaga | gatatagagt | 1080 |
| tcggtattgg | tttttaggtag | tagttagttc | gtcgttcgtt | tgtgtgtttt | tagagttatg | 1140 |
| gagagagtta | gtttgattta | gaaggtttaag | ttggttagagt | aggtcgaacg | ttatgaggat | 1200 |
| atggttagttt | ttatgaaagg | cgtcgtggag | aagggcgagg | agtttttttg | cgaagagcga | 1260 |
| aatttggtttt | tagtagttta | taagaacgtg | gtgggcgtgt | agagggttgt | ttggagggtg | 1320 |
| ttgttttagta | ttgagttagaa | aagtaacgag | gagggttcgg | aggagaaggg | gttcgaggtg | 1380 |
| cgtgagtatc | gggagaagggt | ggagatttag | ttttaggcgg | tgtgcgatat | cgtgttggtg | 1440 |
| ttgtttggata | gttatttttat | taaggaggtc | ggggacgtcg | agagtcgggt | tttttatttg | 1500 |
| aagatgaag | gtgattatta | tcgttatttg | gtcagaggtg | ttatcgggtg | cgataagaag | 1560 |
| cgtattattg | atttagttcg | gttagtttat | taggaggtta | tggatattag | taagaaggag | 1620 |
| atgtcgttta | ttaattttat | tcgtttgggt | ttggttttga | attttttcgt | tttttattac | 1680 |
| gagatcgtta | atagtttcga | ggaggttatt | tttttggtta | agattatttt | cgacgaggtt | 1740 |
| atggttgatt | tgtatatttt | ttagcgaggt | ttttttaaag | atagtatttt | tattatgtag | 1800 |
| ttgttcgag | ataatttgat | attgtggacg | tcgataaacg | tcgggggaaga | ggggggcgag | 1860 |
| gttttttagg | agtttttagag | ttgagtgttg | ttcgttatcg | tttcgttttg | tttttttttag | 1920 |
| ttttttat | tgtcagagag | attagtatgg | ggtgggaggt | tttatttttt | tttttttaggc | 1980 |
| gttgtttttg | ttttaaagg | tttcgtggag | agggattggt | agagttgagg | ttatttgggg | 2040 |
| ttggggattt | tatttttttt | gtagttgttg | agcgtattta | attattggtt | atgtttttat | 2100 |
| ttttgttttt | cgtattcgtt | ttttttcgat | tttaggatta | ggttattttt | tttttttttt | 2160 |
| tgtttttttt | ttgtttttgt | tgtttttgat | cgtaggaatt | gaggagtgtt | tcgtttttgtg | 2220 |
| gttgagaatt | ggatagtggg | aggggttgga | gatgggtgtg | tgtgtgtgtg | tgtgtgtgtg | 2280 |

| | | | | | | |
|-------------|------------|------------|------------|------------|------------|------|
| tgtgtgctgcg | cgcgttagtg | taagatcgag | attgagggaa | agtatgtttg | ttgggtgtga | 2340 |
| ttatgttttt | ttttaataaa | gtttttttgt | gatatttttt | ttgttttttt | tttagttttt | 2400 |
| ggcgatgggt | tggaagtggg | attggaattt | gatttagaga | ttttgatttt | ggatttttga | 2460 |
| gtaggggttt | tgaatttttt | aggtggttta | gtggttcgtà | cgtaagattt | tgagtttagg | 2520 |
| tgaggtcggg | gttt | | | | | 2534 |

<210> 215

<211> 2534

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 215

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| tttaggggtt | taatttagag | gtttaaagtt | agggttttta | agttagattt | tagttttatt | 120 |
| tttagtttat | cgtaagaat | tggaagagag | ataggaggag | tggtataggg | gaattttatt | 180 |
| gagaggaaat | atgggtatat | ttagtagata | tggttttttt | tagtttcggg | tttgtattgg | 240 |
| tcgcgcgta | tatatatata | tatatatata | tatatatatt | tatttttagt | ttttgttatt | 300 |
| tttagttttt | tagttataag | gcgggatatt | ttttaaattt | tacgattaga | ggtagtaggg | 360 |
| gtaggaggga | ggtaagagga | ggggagaagt | agtttggttt | tggggtcggg | aggaagcggg | 420 |
| tgcgagaggt | aggggtgggg | gtatgattag | tggttaggtg | cggttaatat | ttgtaagaag | 480 |
| agtgggattt | ttagtttttag | gtgggttttag | ttttgttagt | ttttttttac | ggagtttttt | 540 |
| ggagtaagaa | tagcgttttag | gggagaaggg | tggggttttt | tattttatat | tagttttttt | 600 |
| ggtagggtgg | gggattggag | ggggtagggc | ggggcggttg | cgggtaatat | ttagtttttg | 660 |
| ggttttttgg | gagtttcggt | tttttttttt | tcggcggttg | cggtcgttta | tagtgttagg | 720 |
| ttgtttcgtà | gtagttgtat | gatgaggggt | ttgtttttgt | aggagttttc | gttgaggggtg | 780 |
| tttagattag | ttatggtttc | gtcgaaagtg | gttttggtta | gagagatggg | tttttcgggg | 840 |
| ttgttggcga | tttcgtagtg | gaagacggaa | aagtttaggg | ttaggttttag | gcggatgggg | 900 |
| ttgggtggcg | gtattttttt | tttgttgatg | tttatggttt | tttggttaggt | tgatcggggt | 960 |
| gagttaatga | tgctgttttt | gtcgttatcg | gtggttattt | cggttaggta | gcggtagtag | 1020 |
| ttattttttt | tttttaggta | gaagattcgg | tttcggcggt | tttcgggttt | tttgatgagg | 1080 |
| tggttggtta | gtaggttttag | tacggtgtcg | tatacgtttt | ggagtttagt | ttttattttt | 1140 |
| tttcgggtatt | tacgtatttt | gggttttttt | tttttcgagt | ttttttcggt | gtttttttgt | 1200 |
| ttaatatttg | atagttattt | ttaggtaggt | ttttgggtcg | ttattacgtt | tttataggtt | 1260 |
| attgagagta | ggttttcggt | ttcgtaggag | agtttttcgt | ttttttttac | ggcggttttt | 1320 |
| atgaagggtg | ttatgttttt | atagcgttcg | gtttgttttg | ttagtttggt | tttttggttt | 1380 |
| agattgggtt | tttttatggt | tttggggata | tataggcggg | cggcggttta | attggttggtt | 1440 |
| tgattaatg | tcggattttg | tggttttttt | gttttttggt | tggttttttg | ttgggtgggt | 1500 |
| gttttagag | aagggtgggg | aggagtaggg | ggcgggatta | gggtttaaga | tttggttttt | 1560 |
| tttttttttt | tttttatatt | tttttcgggt | ttgtagtata | ggtaaaagag | ttgggatgtg | 1620 |
| ggggtgaatt | attagaatag | ttagtaggag | aaatttgggc | gtgggtttta | tttgatttgg | 1680 |
| tattttttta | ggttttaggt | tggttttttt | tggtcggggg | tggtattata | tggttggtta | 1740 |
| tattaggaaa | cggttttttt | aatttagattt | atttttatag | tggtttttta | ggggttaagg | 1800 |
| attggtttta | gttttttggt | gttttagttt | cgatagagtt | tataaaggtt | taggaggatg | 1860 |
| gggtttttta | ttttgttagg | taattttttt | ttttgggtta | ggtgaggata | atttatgttt | 1920 |
| aggtagggtt | atggagtttt | tttaagtattt | ttatattacg | atcgaattta | atttttatta | 1980 |
| tggttttggt | atatatatag | gattatatag | atgggaatat | taagttttag | agaggggtga | 2040 |
| gatttggtta | aagttatata | gttatttaatt | ttttgaaatt | tttttttgta | tttttttttt | 2100 |
| ttagtttttt | ttttattgag | gtttttgatt | tatgagtttt | agattgtgtt | tggaagttag | 2160 |
| atttaggttt | tttttttagt | tatttgaaga | tggttttatt | tttttaggtt | tatttttttt | 2220 |
| taggggtttt | tttgagtttt | tagaatcggt | aggtggtagt | tttttagagt | tcgtttaatg | 2280 |
| aagtgtttta | taagttagtt | ttgaagtttt | agtttagttt | ttgtaattag | ttatttagta | 2340 |
| ggtttgttgg | atatattttt | tattattata | taattttttt | ttttaagttg | gtgggttggt | 2400 |
| gttatttggt | tgaggattta | tttttttggt | ttttacgtta | ggttatttgt | tttttttaag | 2460 |
| ttatatgtta | ttaggattta | gcgggggtta | tagaggggtg | ggttttagtt | ttcgggttgt | 2520 |
| ttattttttt | gttt | | | | | 2534 |

<210> 216

<211> 6558

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 216

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| agtaggtgta | attaatcgta | acgggtttgt | ttgttatntt | cgattaatat | ataattatta | 120 |
| ggtagaatt | gtattttata | agttttttgc | gttttagttat | tttgtatata | ttattttttt | 180 |
| taagttttgt | gttttaaaag | aattgtatag | tgttggaag | ttttttattt | attttaattt | 240 |
| ttagggatc | gagttcgaat | tcgaattagg | tattaggtat | gttttattat | tataaaagat | 300 |
| gtaaaaagat | gcgtatagtg | gcgtatattt | atagttttag | ttattgagga | ggttaatgtg | 360 |
| ggaggattat | atgaggttgt | agtgaattgt | gatgggtgta | ttgtatttta | gttttggcga | 420 |
| tagtgagttt | atgttttaaa | taagtaagta | aatataaatt | aaaaagaatt | tagtttatag | 480 |
| ggtagttgaa | ggtaagagga | aaagatgtta | gaattagaga | tggggagaag | atgggttttt | 540 |
| ggcgtttgtt | gaggttgaga | aatgagatag | ataggttgag | tgtggggtgg | agagaggatg | 600 |
| ggtagagaga | ttgaggttgg | tttgaatgga | aatgaaatgt | taggggtttt | agggttatcg | 660 |
| gggaataaatt | ggagttttta | ggaaagggtt | aacgttgtga | ttatttgtgt | tcgttatgtt | 720 |
| tttttatttt | ttattaattg | tgtgaatttg | gtagattttg | agtttttagt | tttttttttg | 780 |
| gaagtgggg | ttattttatt | ttattttttg | ggattgttgt | gtgaattaaa | tggggtaatg | 840 |
| acggagagt | atttgacgta | tagcgagtgt | tttaaaattt | tagtttgtat | tttttagtaa | 900 |
| aggatatgta | tacgtttatt | gtgagtata | aatttaggat | gatttgaatt | taatgtgata | 960 |
| acgtgggttt | tcgtatgttg | gttatgttgt | cgggagatat | ttatggattt | aattagtata | 1020 |
| ataggggaaa | taaattattt | aatgtatttt | gttaagatag | aatatttttag | aatttatttt | 1080 |
| gtggggcggg | gtataataaa | gggggttttt | ttgttgaaaa | cgtttaagtt | taggttcgtg | 1140 |
| gtattatttt | attaagggtcg | atagttatat | agtaagttag | aggtaatgtt | aggatttaaa | 1200 |
| ttaaattttg | ggttttttata | atgaggttat | tttttttttt | tttgaacggt | ttggggaaag | 1260 |
| ggggtgggtg | ggtagaattt | ggtagtgggt | aattttttat | ttttgttttt | tgggtttttt | 1320 |
| ttgtttttat | tttttaggttt | gtattgattg | attgattgag | ataggggttt | gttttgcgt | 1380 |
| ttaggttgga | gtgtagtgtt | acgattatgg | tttattgtag | ttttaaat | ttaggtttaa | 1440 |
| gtgggttttt | cgtttttttat | ttttcgagta | tttatatttt | taggtttttt | aaatgggttt | 1500 |
| taggtatttt | gttgcgtttt | tagatatatta | tttgggtttt | tgggtaggga | ttgttcggga | 1560 |
| aattttattt | atgtgaagta | ggtgtgggtg | taggaagggtc | gtttggaaat | gaattagtat | 1620 |
| tggtttttgt | ttgagtcgta | agtagggtcg | tagagggttt | ggcggataag | aaaggaggga | 1680 |
| tgataggagg | tcggtattgt | aatgatacgt | tttagttatt | agagggtacg | aagtagttgg | 1740 |
| gtaaaatttc | gcggggtcgt | tggtggaaaa | tttttggtat | ttggagttcg | gagatggggt | 1800 |
| ggacggaatg | tgaggattta | gtttttttgag | gttgggtcgg | ggtagagtta | ttgttttgga | 1860 |
| tgttcgtagg | gtttgtttgt | gtttttgatta | ttttgttttt | gtagatagtt | ggagaatgtg | 1920 |
| agagtgggat | tgggatcgga | tttttaggggt | tatttcgtat | aaattttttg | ttttgtcgtg | 1980 |
| ggaggggag | ttgtttaagg | ttacgtagta | agttagtgtt | aatgaataac | gattattatt | 2040 |
| tttttaggt | atatggttat | ttgatgggct | tagtcgtagt | tttagttttt | gagatagaga | 2100 |
| tttttgatt | aggataggtt | tttaggagtt | gatttttagt | attcgcggtt | ttgttggtgt | 2160 |
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| ttgtttcgg | tttatttttt | ggatttagag | gagagggtat | tatttcgtag | tatagttagt | 2400 |
| ggtgtgattt | tacggggtga | gaaggatttt | tttgttttta | agtatttttt | tagtgatttt | 2460 |
| tggtgttatg | tggtagtcgt | aagtattggg | tggatttttg | tgtgggagag | attttttatt | 2520 |
| tatgtagaaa | tgagtaagat | cggtaggttt | attatgtggg | ggtgaggttg | agagaaaata | 2580 |
| agtatatagg | tgatttagtt | aaaattagaa | ttttttaagt | atatacgaaa | agggtaaaaa | 2640 |
| gggocgtttt | tataggatag | aataggtaga | tattgaattc | ggttgggttt | tgggaagggt | 2700 |
| ttttgtagt | gtttttgaag | ggggggttgg | atttttagtag | gatagagggt | atgggtatgt | 2760 |
| gtgggtacgt | tttgaataga | ggggttagcg | taagtcgagg | gttttggtta | tattagtgtt | 2820 |
| atgtgtcgg | gtgtttaagg | gatacgtagt | agtaggtcga | gtttggagcg | ttttattgtt | 2880 |
| aggtttttta | aaaattttta | attttaattt | aatttttatt | tatttttatt | tttaagttttg | 2940 |
| gtatatatgt | gtagaatgtg | gtttgttata | taggtatata | tgtgttatgg | tgggtttgtt | 3000 |
| tattttattaa | tttattattt | aggttttaag | tttcgtatgt | attagggtatt | agtttttaag | 3060 |
| tttttttttt | ttttgttttt | attttttttt | tcgtaattgt | ttatagggtt | tggtagtggt | 3120 |
| tggttttttt | ttttgtttta | tatgttttta | ttgtttaatt | tttatttatg | agtgagaata | 3180 |
| tatcgttttg | tttttaaggga | tagttatggg | gatgtattgt | agtttttgag | tagggaagggt | 3240 |
| tttgtggagg | tttttagtta | aaaggaaaga | atgggttgtga | aatcgtatgt | attgcgtttt | 3300 |
| tttgtttttt | atttttagtg | tgaagggttt | ttatttcgag | ttttatttga | agttaggtttc | 3360 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gatgggaaga | taagtagtat | gaggggttta | agtattgagg | ggagtaaggg | atattcgggtg | 3420 |
| gttggtgtaa | gggtgtagaag | aggatattgg | gggtttttaag | gtttgattttt | atgtatattg | 3480 |
| tttaggttgg | tttttaagtt | atacggtgat | cgtaggaag | ggattagttt | gtttttagtt | 3540 |
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| gtgttagtgt | tttttttgtt | agggttgggt | ggggttttta | tttattgttt | tgggattgtt | 3660 |
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| tggaatttcg | ggtgagttat | ttagggttga | ggtagagggg | ttgggggagg | ggaagaagtt | 3780 |
| attcgatagt | tggagtaggg | aggggagttg | gggttatagg | aagggcgggtg | ttttgatgtt | 3840 |
| tagacgggtc | gggatagata | aagggttaag | gaggaagggg | ttttgggagg | gggtagtttt | 3900 |
| tttttgggtt | gggttttgaa | tggttatagt | gtttgttttt | tttcgggttt | ggggaggata | 3960 |
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| tgggttggga | agttgttttag | ttggtgtttt | tagttttggg | tagggatgta | tttttattta | 4080 |
| tttatttagt | ttttaagttg | gagaagagga | ggtaaagtt | tttttgttta | gtttttaatt | 4140 |
| attcgggatt | tttttatgtt | ttttatagat | tgtggttttag | tttaattgcg | gttgtgtgta | 4200 |
| gagtaatttt | attttttatt | gtttttttat | tttttttagat | atttttttat | atagagggat | 4260 |
| tttttttaggt | atttttaagt | atattttagt | atttttattat | tttattaaga | ggtatttttg | 4320 |
| tgttggttat | taaaagttaa | tttattttat | ttatgttttg | aagttagttt | tgtttttttt | 4380 |
| tttttgatgt | tttttagttg | tttttttttg | tttttagttt | tttaaggggtg | gttttaggtt | 4440 |
| gttttttttt | tatatatata | ggcgtatgta | tgtatacgag | tattggatta | tgaagtttta | 4500 |
| gcgtgtgttt | atagtttttt | atataggagt | gggtgtgat | ttataggtat | gttatgagaa | 4560 |
| aggttttgg | tattagtttt | taggttttag | agtaggggtt | gttttttttt | atttcggttt | 4620 |
| gatgttta | gtttttacga | tattttttat | tttttattgt | ggtttgggtg | ggtttagggg | 4680 |
| tgtttttga | tttggttttag | agtttttttt | tagttggtgg | tggagtgggt | attttttggg | 4740 |
| agggaggggg | ttgggagggg | atgagtggga | atggttaagag | gttaggggtt | ggtagggatta | 4800 |
| gggttaggta | ggtttggttt | ttttaaaatg | ttaagttggg | ggtagtggtg | gtttatatat | 4860 |
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| tttatagggt | cgaatgttta | tttttagtggt | ggttaattgg | gagattttttt | tttatagggtt | 1320 |
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| tttggtggg | ttttgggagg | gtttgtttt | ggggaggacg | ttggtatgaa | tagttaaaag | 180 |
| tattattttg | agattttacg | ttaatatttt | tttttgaaa | tatgatattt | gggaggattg | 240 |
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| ttttcgaagg | ttttcggggg | ttttgtttt | ttgagttatt | ttttatttgt | ttttgtcgat | 360 |
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| tttttatttg | taaagggaag | attagaatag | tattgtaagg | atatgtttta | aaattttaata | 840 |
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| taggatttta | atttttcggt | ttttaataaa | cgataattgt | atagaattat | taattttttg | 300 |

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| agtataatttt | ttttttaaat | aaaatagtaa | cggtaaattt | tattttatta | aattttgtgt | 1860 |
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<212> DNA

<213> Artificial Sequence

<220>

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| aggcggtagc | gttgggtagg | gttcggttc | gtcgtcgaag | ttgagttata | cggttagtac | 180 |
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| gtatttttcg | acgtttgttt | ttttcgcgtt | tatttcgggt | tcgttttagt | ttttcgtttt | 420 |
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| agatggtata | taattttgtg | attaattggt | taatgatgtg | ggatggattt | aagtggagaa | 1860 |
| gtagtttaga | aaaagaaggg | tttagagagt | tttatattag | gttaaaaaata | attttttttt | 1920 |
| agatagtttc | gttttattat | ttaggttgga | gtgtagtgtt | tttagtttag | tttagttgta | 1980 |
| atttttattt | gtcgagttaa | agtgattatc | gtgttttagt | ttttggagta | gttgggatta | 2040 |
| taggtgtgtg | ttattatatt | taggtaattt | ttgtattttt | agtagagacg | gggttttatt | 2100 |
| atgtttgtta | ggttggtttt | gaatttttta | ttttaggtaa | tttgtttggt | ttgggttttt | 2160 |
| taagtgttgg | gattataggt | gtgagttatc | gtgttttagt | taaaaaataa | ttttaagtag | 2220 |
| aaagaaaaaa | attttattaag | tgtagatat | tgtgttaagt | attttacgtg | aattaagggt | 2280 |
| atgttattat | ttttatttta | tagttaagga | aatagaaggg | tatataagaa | tgtgaagggt | 2340 |
| tagtattata | cgtttgtaatt | ttcgagattt | tgggagttta | aggtaggtgg | attatttgag | 2400 |
| tttaggagtt | ggaattagtt | tgggtaatat | acggaggttt | tgtttttata | aaaaatgaaa | 2460 |
| gaattagtta | ggtatagtgg | cgtgtatttt | tagtttttagt | t | | 2501 |

<210> 226

<211> 2401

<212> DNA

<213> Artificial Sequence

20>

23> chemically treated genomic DNA (Homo sapiens)

<400> 226

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| ttattaaaga | aaaaaaagat | gattttattag | atagttgtta | aggattttat | ataaaattat | 60 |
| acgatatag | gatagatggt | aattaagagg | gaatttagga | ttcgttatta | ttagttggaa | 120 |
| atatttgatt | tttagtttgt | aaatgtgata | agtttagatta | atattagtag | gatattgaat | 180 |
| atagtttgta | gggatgagtt | tttgcgttat | ttttggatat | gtgtttaagt | aattagaata | 240 |
| atttaaaatg | ttattaggtt | tttgttggtta | ttttataaaa | tttcgaatag | tgagttgggt | 300 |
| ttttaaggaa | tttggttttg | ttagttttatt | ttatgttgta | taataaatag | gtttaaagtt | 360 |
| tttggtagcg | tatattaagt | atggaggatt | ttttatttat | tacgatagtt | ttttcgttgg | 420 |
| agggttgggg | ttgtatttta | tttttttttt | tgggaagggc | ggtttttggt | tgaggtttta | 480 |
| tttggtttat | agtagaggga | tgaacgcgtg | ggattttggt | tttgacgggt | tttatttggt | 540 |
| aatggtatat | gttaagtggg | ttacgtttta | ttgttttagag | taagttatat | ggttacgttt | 600 |
| gatattgacg | tcgcgggaaat | gtagaatttt | tttgtatttg | gggaggtaga | tatttgagata | 660 |
| atatgttaatt | tattataggg | ttagttggat | gaagaacggt | taagggttta | ggttttttat | 720 |
| ttcgaagttag | tcggaattag | tcggggtcgt | gagattaaagt | tacggttatt | agtgttcggt | 780 |
| tgggaattatg | ttttgttttt | gtcgtgtttta | tattgttagta | gggtttttgt | tttttaattt | 840 |
| atttgaaatt | ggtggtgggt | gtggtatata | gatgagaaat | aggaattttt | tacgttgggt | 900 |
| tttaaatagga | gttgcggtgg | gaatataaat | ggtgtagtta | ttttggaaga | tagtttggtg | 960 |
| gtttttttata | aaatttaaag | tattttttat | atatgattcg | ttatatatta | tttagtaatt | 1020 |
| gtatttttttg | gtattttgtt | agatgagtta | aaaatttgta | tttatataaa | aatttgtacg | 1080 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| tggaatgttga | tagtagtttt | atttataaatt | gttttaaattt | ggaagtttttt | aggaggtgag | 1140 |
| tgggttaaata | aattgtgggtg | ttttcggtta | gcggaatatt | atttagtggt | aaaaagaaat | 1200 |
| gagtttaagt | tatggaagaa | tatgaaagaa | ttttaagtat | tattaagtta | aagaagttaa | 1260 |
| tttgaaaagg | ttgatgttgt | atgagtttat | atttatgata | ttatagaaaa | ggtaaaatta | 1320 |
| taaagatagt | aaaaggatta | gtggttgtag | gagttaggga | ggagggaggg | atgaataggt | 1380 |
| ggggtataga | ggatttttag | ggtagtgaaa | ttattttgta | tgatattgta | atgggtggata | 1440 |
| taggatagta | agtatttggt | ttttatttcg | tagaatgtac | ggtattgaga | acggattttt | 1500 |
| ttgtaataata | tggattttta | gttataaatat | tgaatttttt | tcgggggttc | gtatcggtcg | 1560 |
| tagcgttttt | taattttcgt | tttcggttcg | tttatcggtt | tttttttttg | ttatagcgcg | 1620 |
| ttcgttttcg | ggtcggtta | tagtcgcgog | tttcggtcgc | gcgtttcggt | tcgttttcgg | 1680 |
| tgggtgtgcg | cgcggtta | ggcggtg | cggggtcgg | gtcgcggcg | ggcggggtag | 1740 |
| cgggcggtc | gttaatcg | gtggtgtgt | tgaaattgaa | aatattatat | tatgttaatc | 1800 |
| gcggtcgggt | tcgcgcgtac | gggggtggg | ttcgcgcgta | taaagggggc | gtaggcgggt | 1860 |
| tgggcgtttt | ataggttaag | tgogttgtgt | tcgaggggtg | tcggttaggt | ttgagcgagc | 1920 |
| gagttagtta | gtaggtatcg | agggggcgcg | gttgtcgttc | ggacgagata | ggcgaattcg | 1980 |
| acgtagaaga | gtttattatc | ggatagttag | gtagtctcg | cgtttttcgt | atacgtagag | 2040 |
| tcgggcggcg | cggggttttt | tttgcgttcg | gttttcgttt | tttttttttt | tttttttttt | 2100 |
| tttttttcgt | tggttttttt | tttttcgttg | ttcgcgtttg | cgtagtttcg | ggttatgttc | 2160 |
| gacgcgtttt | ttcgtagtat | atttacgatg | gagcgttttg | tcgttcgtgg | gattttttta | 2220 |
| gtattagtgc | gtattagcgt | ttgtcgtagt | tttttcgggt | cggtggatta | cgaggagttg | 2280 |
| gtcgcgaggt | tgtaggttcg | tttggtcgg | ttgaacgtcg | aggattagaa | tcgttgggat | 2340 |
| acgattttt | agtaggat | gtcgttcgg | ggttttgac | gttttagtg | gatcgaagt | 2400 |
| g | | | | | | 2401 |

<210> 227

<211> 2401

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 227

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ttatttcggt | ttattgtagg | cgtttaggg | ttcgtagcgg | tatgttttgt | tggaagtctg | 60 |
| aatttttagcg | gttttggtt | tcggcgttta | gttcggttag | gcgggtttgt | agttcgcggt | 120 |
| ttagtttttc | gtggtttatc | ggttcgaaga | ggttgcggta | ggcgttggtg | cgtattagta | 180 |
| ttgggaagg | tttacggcg | ataagacgtt | ttatcgtgga | tgtgttgcg | agggacgcgt | 240 |
| cggatatggt | tcggggttgc | gtaaacgcgg | gtagcgagag | aggagaggat | agcgagaaga | 300 |
| aggggaaagg | agaggaggag | agggcgagg | tcgggcgtaa | gggagatttc | gcgtcgttcg | 360 |
| ttttgcgtg | tcgagggac | gcggcggtta | tttggttgtt | cggtggtgga | tttttttgcg | 420 |
| cggttcgt | ttgtttcgtt | cggacggtag | tcgcgttttt | tcgatgtttg | ttggttagtt | 480 |
| cggttcgttta | ggtttggtcg | gtatttttcg | agtatagcgt | atttggtttg | tggaacgttt | 540 |
| agttcgtttg | cgtttttttt | atacgogcgg | gtttttatttt | cgtcgcgcgg | ggttcggtcg | 600 |
| cgattagtat | aatgtagtat | tttttagtttt | aataatatta | cggcgattgg | cggtcgtttc | 660 |
| gttggttcgt | ttcgtcgcgg | ttcggttttc | gcgtatcgtt | tattggtcgc | gcgtatattt | 720 |
| atcggggg | ggcgggg | cgcggtcggg | gcgcgcggtt | gattggcggt | cgcgggcgga | 780 |
| gcgcgttgta | gtaggggaag | ggggcggtga | gcggggcggg | ggcgggagtt | aaagggcggt | 840 |
| gcgggcggta | cggaatttcg | aaagggattt | aatattataa | ttgaaagt | atatgttata | 900 |
| ggaggggttcg | tttttagtgt | cgtatatattt | acgggataaa | ggataaatgt | ttattgtttt | 960 |
| gtgtttatta | ttatagtatt | atataaggta | gtttttattgt | tttaaaatt | ttttgtgttt | 1020 |
| tattttattta | tttttttttt | tttttttagtt | tttgtaatta | ttgatttttt | tattgttttt | 1080 |
| gtagttttgt | ttttttttata | atgttataga | tgtgaattta | tatagtatta | gttttttttag | 1140 |
| attggttttt | ttgattta | aatattttaag | gttttttttat | gttttttttat | gatttgagtt | 1200 |
| tatttttttt | tagtattgaa | taatatttcg | ttgatcggag | gtattatagt | ttgtttattt | 1260 |
| atttattttt | tgaaggtttt | taggtttggg | taattatgaa | taaagtgtgt | attaatattt | 1320 |
| acgtgtaagt | ttttgtgtgg | atgtaagttt | ttgatttatt | tgggtaaata | tttaaggggta | 1380 |
| taattgttgg | atggtgtgtg | gcggattata | tgtgaagggt | atatttagtt | ttgtaaggag | 1440 |
| ttattaaatt | atttttttaa | gtggttgat | tatttgtgtt | tttatcgtag | ttttgttaa | 1500 |
| agtttagcgt | ggagagtttt | tggttttttat | ttgtgtatta | tatttattat | taattttaga | 1560 |
| tgaattaaaa | aatagaaatt | ttattataat | gtggatcacg | taaggataag | gtataatttt | 1620 |
| aaacgaatat | tgatgatcgt | ggtttgattt | tacggtttcg | gttggttcgg | tttggttcgg | 1680 |
| ggtgaagagt | ttgggttttt | ggtcgttttt | tatttagttg | gttttgaat | gaattgtatg | 1740 |

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|------|
| ttgtttaaat | atttgttttt | ttaaagttag | gaagattttg | tatttttcgt | acgttaatat | 1800 |
| tagacgtggt | tatgtaattt | gttttgggta | gtgaaacgtg | atttatttgg | tatgtattat | 1860 |
| tgtaaagtgg | agttcggtta | agtttaggggt | ttgtcgtttt | atttttttgt | tgtgaqataa | 1920 |
| atgagatttt | agataggggt | cgtttttttt | aaaagagaaa | atggagtata | atttttagttt | 1980 |
| tttagcgaag | ggattgtcgt | ggtgagttag | agatttttta | tgtttgatgt | acgttggttaa | 2040 |
| gagttttggg | tttgtttggt | atgtagtata | aggtaagttag | atagagatag | gttttttgaa | 2100 |
| gatttaattt | attgttcgag | gtttatggga | atgatatgaa | gggtttgggtg | gtattttgag | 2160 |
| ttgttttggg | tatttggtata | tatgttttaga | aatgacgtag | agatttattt | ttgtaagttag | 2220 |
| tgtttagtgt | tttgttggtg | ttggttttagt | ttgttatatt | tgtagggttg | aggttagggtg | 2280 |
| tttttagttg | gtagtgacgg | gttttgagtt | tttttttggt | tattatttat | tttgttatcgt | 2340 |
| tgtagtttta | tgtgagtgtt | ttaataattg | tttagtaagt | tatttttttt | ttttttgatg | 2400 |
| a | | | | | | 2401 |

<210> 228

<211> 1508

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 228

| | | | | | | |
|------------|-------------|------------|-------------|-------------|------------|------|
| atattataat | tataaatatt | tagtgtattt | tgtaaatatg | gtataatttg | ttggtataaa | 60 |
| atattattgt | tttagaaaat | atcggtaata | aaattataga | aaagttaaag | atttttattt | 120 |
| tttatttcga | agcgtttggg | agatatttta | gaaacggatg | ggaaatgtta | aattttgtat | 180 |
| gtttgtttat | tttttttttt | atatacatta | gatgtaaacg | agtgttatta | aaagtatat | 240 |
| ataggatttt | atatagattt | tttttataag | ggatttataa | agtttagatg | tgaatgtat | 300 |
| tttaaagggg | tttttagtcgt | tttttatttt | tttttttggtg | aaatagggaa | gataatgtg | 360 |
| tttttaaggg | tagagatgga | atttgggtta | atgggtcggg | gggtgggggg | aagttggaag | 420 |
| ggattgtttt | aggatatggt | aggatagtg | attgtttttg | tcgttttggt | gtttatatcg | 480 |
| gggttttttg | taggcgcgtc | ggtttttttt | ttttttgttg | agaagaagt | ttgttaaaat | 540 |
| attcgttttt | ttcgggaatt | ttttcgtggg | tttaaagcgg | gaaaatgttg | tttttaggtt | 600 |
| aaaataaatt | gtttaagttt | tttagcgcgg | gagaaacgtt | tttattcgtt | ttttgttttc | 660 |
| gggggtgttt | ttcgtttttt | gttgtagtaa | ttttggggag | tgtttagatt | cggggtagta | 720 |
| tacgttcggg | ttaatcgcga | gtagaataaa | tttttggttg | gcgggttagga | agtttttttt | 780 |
| tagttatcgt | tttttttttag | tgtttttttt | tttttttata | taataataaga | tttttttttt | 840 |
| ttagtttttt | ttaaagtatag | tttaaggaaa | tttttttata | gtttttattt | agttacgggt | 900 |
| tagtatgttt | gggggttaa | acgtagattc | ggaggtaggt | attcgtgggg | gggcgtcggg | 960 |
| tcgggcgtgc | ggggaagtgt | tcgtttttgt | tatttgtttt | tttaaataat | tcgattgttg | 1020 |
| tttggtttt | ttagtttttt | ttttatttcg | gagtattttt | ttggcgttg | tatcgttgaa | 1080 |
| ttatgggttt | gggcggggag | gtgaagagaa | gttaggaatg | ttttatgttt | ttttaatgga | 1140 |
| gaggggtttt | cgggagtttt | tgagtttaga | ggatacggaa | aaggggattg | gggttttgag | 1200 |
| attgggtttg | ttgggtttta | gacgcgtttt | ttggatgggt | ttaggatgtt | ttttgtcgc | 1260 |
| gggaatttcg | cgttcggtt | ttgtttgttg | ggggttcgaa | aaagtggatt | gtagggtgga | 1320 |
| agggttattt | tattcgagtt | ttggggatag | ttttcgggat | ttttcgttaa | gcgtttaaaa | 1380 |
| cgttaggttt | ttaagcggcg | cgcggtgttt | ttgtattttt | taaaattttt | gaaatatttt | 1440 |
| aaaaattttt | ttgtattttg | gcgttttggt | gggtttttta | aaaaaagtaa | attttttttt | 1500 |
| taaatgta | | | | | | 1508 |

<210> 229

<211> 1508

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 229

| | | | | | | |
|-------------|------------|-------------|------------|-------------|------------|-----|
| tgtattttggg | agggaggttt | atttttttttg | gaaaattttg | ttagacgtta | agatgtagaa | 60 |
| ggatttttga | gatgttttaa | gaatttttga | aagtgtaaaa | atatcgcgcg | tcgtttgggg | 120 |
| atttgcgttt | ttgggcgttt | ggcggagagt | ttcggggatt | gttttttagga | ttcgggtaaa | 180 |

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| taataattttt | tattttgtaa | tttatttttt | cgaattttta | gtaggtaggg | tcggatcgcg | 240 |
| gggttttcgc | gataggggag | tatttttagat | ttattttagaa | aacgcgtttt | gggttttaata | 300 |
| gatttaattt | taggatttta | attttttttt | tcgtgttttt | ttagttagg | ggttttcgag | 360 |
| gttttttttt | tattaggaaa | atataaaata | tttttggttt | ttttttattt | tttcgttttag | 420 |
| gtttattttt | tagcgggtgtt | aacgttagag | gagtgtttcg | aagtggaaag | aggggtgggg | 480 |
| ggtagatta | gtagtcggga | tatttgga | ggtagatagt | agaagcggat | attttttcgt | 540 |
| acgttcgagt | cggcgttttt | ttacggatgt | ttattttcga | gtttacgtat | ttgttttttag | 600 |
| atatgttggt | tcgtgggttg | atgaaaattg | tgaggagggt | tttttggtt | gtgttttaag | 660 |
| ggaattgagg | aaggaagatt | ttgtattgta | tggggggaaa | aaaaggatt | ggaggggggc | 720 |
| ggtggttggg | agggagtttt | ttggtcgttt | attaaagggt | tgttttgttc | gcggttggtt | 780 |
| cggacgtgtg | ttgtttcggg | tttaggtatt | ttttaagggt | ttggtagtag | agggcgggga | 840 |
| gtattttcgg | gggtagagag | cgagtaagaa | cgtttttttc | gcgttggggg | gtttggatag | 900 |
| attattttta | atttgaggta | atattttttc | gttttgaatt | tacggggggg | ttttcggggg | 960 |
| aggcggatgt | tttggtaggg | ttttttttta | gtaggggggg | agggagtcga | cgcgtttgta | 1020 |
| gagagtttcg | gtatgggtaa | taaggcggta | gaaataattt | attattttgt | tatgttttaa | 1080 |
| ggtagttttt | tttaattttt | ttttattttt | cggttttattg | gtttaagttt | tatttttggt | 1140 |
| tttgaaaata | tatgtgtttt | ttttgtttta | tagagggagg | gatgagagac | ggtttagaat | 1200 |
| tttttagggg | atattttata | tttaaaattt | gtggattttt | tatggaagga | atttgtgtgg | 1260 |
| gtgtttgtgg | tgtattttttg | gtgatattcg | tttatattta | gtcgggtgtg | aaagaaaaat | 1320 |
| aagtaggtat | gtagaattta | atatttttta | ttcgtttttg | aaatgttttt | taaacgtttc | 1380 |
| aaataagaa | atgaagattt | ttaatttttt | tataatttta | ttatcgatat | tttttggaat | 1440 |
| atggaattt | tatgtaata | ggttatgtta | tatttgtaaa | atatattaaa | tgtttataat | 1500 |
| tgtagaat | | | | | | 1508 |

<210> 230

<211> 1984

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<220>

<221> unsure

<222> (9, 17, 18, 33, 41, 49, 50, 52, 54, 62, 80, 84, 127, 157, 159)

<223> unknown base

<220>

<221> unsure

<222> (175, 207..209, 214, 1181)

<223> unknown base

<400> 230

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| agttttagnt | attattntta | tttttattaa | tgnttttggg | nttatagggn | gnghnttttt | 60 |
| gnttaaata | tagttaatgn | aggnatttta | aaaggatat | tattttatat | ttatttagtg | 120 |
| gttatgntat | tatttaattt | ttattataat | tttgtgngnt | tagtataatt | tgtgntttta | 180 |
| ttttatttgt | gaataaatgg | aggtagnnnt | ttgngtaatt | tataagtaag | tggtagattc | 240 |
| gggggttgtg | tttagataat | gtggttttag | attttttgtt | ttttttgtt | ttttgttgta | 300 |
| ttttgattga | gttttagttat | ttattttttt | aatatatatt | aattgttggt | tttatgtttt | 360 |
| aggttttgtg | ttagatgtta | gaaatatatt | tttattttatt | ggatttttgt | atggttttatt | 420 |
| gttttagtggt | ttgttatggt | acgtgttata | taatgtattt | atttcgggtat | ttagttttatg | 480 |
| gaaaataatg | ttgaaagata | ttgtatgtat | gtttttataa | taaaattatg | taatttatgt | 540 |
| ttttttttatt | gttttggtta | ttagggaagt | tttattttaaa | ttagagtaaa | tatattagaa | 600 |
| tttgggtttg | ttatttttagt | ttgttggaatt | tttttttttg | gttttagattt | tttatttttg | 660 |
| tttataaatt | ttattgtata | aatgtttttt | attgtaaaat | atttttaaatt | ttttttaagg | 720 |
| gaagggttga | tggaaatgat | atagtaagggt | tttttttgta | ttttttttaga | tttttattag | 780 |
| ggaaggtaga | tttagatggt | tttttttattt | ttagtttttaa | agtttttttat | ttataaaatt | 840 |
| ttttaagtag | tgattattgt | tgtttttgagt | atttgagggt | agtttagagt | ttttgaaagg | 900 |
| taaaatttat | atataaaaag | aagttttttt | cgatttagat | tttagttttg | gtgttagatg | 960 |
| tatatttgag | gagtaggtgg | ttagtttagat | ttttatttga | gtagttaata | aaattttattg | 1020 |
| ttttttaatg | gaattttttt | tgtaagttcg | aattgatttg | ttatttttgt | gatttgtgag | 1080 |
| atggtaggga | agtattaagt | attattatga | tttgggttat | agtggtggga | aaaaaggaaa | 1140 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| aaagaaaaaa | aaaattttatt | gttaagtttt | gttaggcgta | naaagggttg | gaattgttgg | 1200 |
| ggttatttta | tttgatttat | tggaaataga | gtggatttta | ttaatatatt | aataaagaga | 1260 |
| atTTTTTgt | attaggttgg | aagtggctgt | tagtttttcg | tgtaatttta | ttttttggaa | 1320 |
| aagtggaaat | agttgggtatt | gttttagcgtg | atttgtgagg | ttgagtttta | atagtttaaa | 1380 |
| gaagtaaattg | ggatgttatt | ttcgcggggg | tcgtttttcg | cgagggtgtt | atttcgtatt | 1440 |
| tgttatgtaa | aacgagggag | cgtttaggaag | gaattcgttt | tgtaaagtta | ttggtttttg | 1500 |
| ttattagttt | ttatttaattg | ttttcgtgat | gttgttgttg | atttattttg | gaagtttggt | 1560 |
| ggttggcgag | gtagagtttt | tttttaaagt | ttggttttta | cggaaaatat | gttttagtga | 1620 |
| gtcgcgtgta | tgaatgaaaa | cgtcgtcggg | cgttttttagt | cggataaaaat | gtagtcgaga | 1680 |
| atttcgttcg | ttttgtgcgt | ttttttgttt | taggtagggg | agaggggttg | tcgggcgcgt | 1740 |
| tttgcgtttc | gtttttgtat | tcggatcggt | cggtacgggt | aggggtgagg | ggtttttcggg | 1800 |
| gggtcggggg | tttcggtcgc | ggcggcgaag | atagatcggg | gttcggtagg | gaggttattt | 1860 |
| cgagtttaga | gatttttaggt | atTTTTtata | tataggtttt | tattttggcg | tcggtgcgtg | 1920 |
| tgtgtgtgtg | tgtgtgtgtg | tgtgtgtgtg | tgtgtgtgtg | tgtgtacgtt | cgtaaacggg | 1980 |
| agga | | | | | | 1984 |

<210> 231

<211> 1984

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

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<221> unsure

<222> (804, 1771, 1776..1778, 1810, 1826, 1828, 1858, 1901, 1905)

<223> unknown base

<220>

<221> unsure

<222> (1923, 1931, 1933, 1935, 1936, 1944, 1952, 1967, 1968, 1976)

<223> unknown base

<400> 231

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| ttcgggaatga | ttttttttatc | gagtttcgat | ttgttttcgt | cgtcgcgatac | ggaggttttcg | 180 |
| atTTTTtcgaa | agtttttttta | ttttgttcgt | gtcggggogat | tcgaatgtag | aaacggggcg | 240 |
| agagcgcgt | tcggtagttt | ttttttttta | tttgggatag | gagaacgtat | agaacgagcg | 300 |
| agtttttcgg | ttgtattttg | ttcgattaga | agcgttcggc | ggcgttttta | tttatgtacg | 360 |
| cggttgtatt | gagtatatatt | ttcgtgggag | ttaggttttg | aggagaggtt | ttgtttcgtt | 420 |
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| agattttttt | tattaaaatg | ttaataagat | ttattttatt | tttaataaat | tagataaaaat | 780 |
| ggtttttagta | gttttttagtt | ttnttaegtt | tggttaagggt | tggttagtgga | tttttttttt | 840 |
| tttttttttt | ttttttttat | tattgtgggt | taagttatga | tggtgttttg | tgtttttttg | 900 |
| ttattttata | aattataaag | atgatagatt | aattcaggtt | tgtagaaaaa | atTTTTattaa | 960 |
| ggggtaatag | atTTTTattaa | ttgttttaggt | gagagtttga | ttagttattt | atTTTTtaaaa | 1020 |
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| tttatttttt | agaagttttg | aattattttt | aggtagtttag | aatagtagta | gttattgttt | 1140 |
| aagggatttt | ataaatgggg | ggttttggga | ttgagggtta | gagggatatt | taggtttgtt | 1200 |
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| gagtaattga | ttatgttaag | atttagtgga | tggggatgta | tttttagtat | ttggtatagg | 1620 |

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| aagatgtagt | agaaggtagg | gaggggtaag | gagtttgag | ttatattgtt | taggtatagt | 1740 |
| tttcggattt | gttattttat | tgtaaattat | ntaaannntt | gtttttattt | gtttatagat | 1800 |
| aaaatgaaan | tataaattgt | attgantnta | taagggtgtg | gtgaggatta | agtgatgnta | 1860 |
| taattattga | ataaatataa | agtgatgtgt | tttttaagat | ntttntattg | gttggtgttt | 1920 |
| ggntagaagg | ntntnntttg | tggnnttaag | gntattgata | aagatgnnag | tgatgnttga | 1980 |
| agtt | | | | | | 1984 |

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<211> 17897

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

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| ttattgtttt | ataatatgat | attataggtt | aggtagtttt | gtagataaatt | gggataaatt | 180 |
| tttttaattt | aagtaaaaaat | tttagatggt | agttttttta | tttgggatta | tgaagtaggt | 240 |
| aggatttttt | tttttttttt | aatagagttt | aagtagtaag | atcgaataag | atgggatgaa | 300 |
| tttaaagaga | aatattttgta | tttgttttag | tttttaatta | atattttattg | aattttttta | 360 |
| cggttaggtg | tgtaaatgtt | taggagggat | gagataagat | gatgatgatg | atgatgatga | 420 |
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<400> 234

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| tttgataagg | aagataatga | tgatgattat | tttaaaatga | athtagatt | gtaatgtaaa | 180 |
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| tagttttaat | tataaatttt | aaatttttag | agatgtaatt | tattttttta | aaatgaaata | 300 |
| gaagattgaa | attattaaat | tattaaaaag | aaaatgattt | acgtttttag | ttgaaatttt | 360 |
| atgtaagatt | ttatgtaata | aataggagtg | ttataaatgg | aatgatgaaa | tatgattaga | 420 |
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| ttttttttta | taagattttt | ataaattgag | gtatttggtg | tagttttatt | ttaggtttta | 600 |
| tggtgttatt | tttttgtaat | gttaaggatt | taggatataa | ttgaattttt | tattttttat | 660 |
| tttttttttg | gtgtgtgtgt | atatatatat | gtatatatat | atatatatat | atatatatat | 720 |
| ttttttttta | gtattttatt | tttataatgt | tttttttgag | tattatttat | gatagatggt | 780 |
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| tttttaatta | tgtttttaaaa | cgagaataga | aaattagttt | taataagttt | aggtaattga | 900 |
| aaagtaaatg | ttatgttgta | ttttgattta | tggttataat | ttataatttt | ggaaaagtgg | 960 |
| atagaaaaga | taaaagagtg | aatttttaaaa | ttcgaattta | ttttattagt | attttttatg | 1020 |
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| ttggatatatt | agcgtttttg | ttaaattttg | ttatcgtcgt | tttttttggt | tattagaagg | 1140 |
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| taggattagt | attatgagga | gaattttatt | ttttcgtttt | tttttttaag | aaataaggag | 1260 |
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| agttatgtat | gtatgtgttg | tatatagagt | agatatatag | tttattaagc | gtcgttatta | 1440 |
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| atttgggttag | ttttttgggt | tttcgatttt | tttattttcg | tgggtaaaaa | attttggttt | 1860 |
| tatcgggttt | acgtaatttt | tttaagggga | gaggagggaa | aaatttggtg | ggggtacgaa | 1920 |
| ggcggaata | gaaatagtta | tttcgttata | tgggtttggt | tttttagttt | ataaaaagga | 1980 |
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| ttttttgaat | ttattattgt | aaagttgatt | tatagttaaa | taattaaatg | tttaaattta | 2940 |
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<211> 2987

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 235

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| atggaaatat | aattttttta | tttgtttttag | aatggataaa | acgtagaaat | attaattttt | 180 |
| tatttttaaat | aaggataata | gtatatttta | tttggtatat | tatgttatta | agtttttttt | 240 |
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| ttttttaaat | taaaatggat | ttagtatatt | aattaatatt | tagggaaaaa | tttaaagtaa | 360 |
| aatagtttat | ttttaagata | ttttgtttat | tttaaaatat | aattcgggtt | tttttgggag | 420 |
| taggaaagaa | ttgattagaa | tattttaaaa | aatttttttt | atttaataaa | aagggtttta | 480 |
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| tagtattatt | tattttttat | taggaggtga | gagtgtttta | gatcgggtta | gtaattgggt | 600 |
| tataatgatt | agtgtttgtg | ggaaagttgg | aatatattacg | gagttttttc | gaatttttagc | 660 |
| ggtttaagtt | tttttttaag | ttacgtagtt | tttttattcg | gagagaagtc | ggagtattgg | 720 |
| gatagattta | ggaggttaga | gcggaaattt | tgttcgggtg | cgtggaatcg | gagttttcgg | 780 |
| tgcgcggcgt | taggtattta | tttgatatgt | tgagcgttag | gatcgcgtat | agtagtaggg | 840 |
| gcgggagag | tatcgtagcg | gcgggtaggg | cgcgccgcgg | gggtaggttt | tgttgtttga | 900 |
| ggcggtttgg | ttgtggagtt | gaaggaggcg | ttgttgagga | gtttttggac | gtgtttttga | 960 |
| cgtttattgt | aagtcgtatg | ataattggtc | gttaatcgag | agaatttttt | tttttataag | 1020 |
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| taaatagtta | atgtgagttt | tacgggttat | taataataag | ttttttgttt | tttgatggat | 1860 |
| aaaggaagcg | gcgatggtta | gaatttgtag | ggacgttaaa | tgtttaaaac | gtatgtttta | 1920 |
| aggtattttt | ttttttgatg | cgtggattat | tttggttatt | agttttttat | aggagatatt | 1980 |
| ggtaaaataa | attcagagttt | taaagtttat | ttttttgttt | tttttgttta | tttttttaag | 2040 |
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| gttgtttgaa | aagagatttg | gatataaaag | tgagggaaaa | atagggtata | aggaataatt | 2940 |
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<211> 5683

<212> DNA

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<220>

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<400> 236

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| gttggtttta | aatatagttt | tttttattag | taatatgtga | gtagtttgta | tttatcgttt | 180 |
| agagtatgaa | aaagattttt | gttaaagacg | gtttttgggg | atttattatt | attatatggt | 240 |
| aagagtttgt | tttttatggt | tttatttttt | tattttgtta | atttttttta | ttttattttt | 300 |
| tcggtttagt | gtgagatttt | attatttttt | ttttttattt | tttttttttt | atatttttgg | 360 |
| tttttttagta | ggttaatggt | tttggttttt | tattggaatt | tattttattt | ggttattttt | 420 |
| ttttttatga | atttggttga | ttatatttta | aagttattta | aaagagggat | ataaagatat | 480 |
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| atggtgtaaa | ttttttggaa | agtatttttag | taatataggt | gaagagtgtt | tataatgtgt | 660 |
| ttattttatg | atttattttt | atttttttta | ttttaaagga | ataagaagag | gtttaattaa | 720 |
| agtatgagt | aaaagggtat | ttaaatatag | ggaaaggggt | cgttatgatg | tttacggttt | 780 |
| taagaaatag | aaaataataa | tttggtttta | ataataagta | tataattaaa | gaaatttaga | 840 |
| agtaggattt | ttttaagagt | tgagagattt | agtagtttaa | aaatgtgatt | tgatatacga | 900 |
| gtttttttta | tggttttggt | tttttttttt | taatatgggt | tttatattaa | atttggtttt | 960 |
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| ttgagattgt | attattgtat | tttagtttgg | gagatagagt | aagattttat | tttatttttt | 1740 |
| attaaaaaaa | aatttttggtt | tttataatgtg | aaaaataaaa | agtttaattt | taaaaaattaa | 1800 |
| ataataaaga | gtgttaggtg | ataagtttta | tgatagagat | aatgtgtggt | ttaaaatata | 1860 |
| tagtataaaa | tagatggaaa | atattttatg | gagaagggag | agtttgaatt | ggtgtttgat | 1920 |
| tgaaggataa | gaaaaat | ttggttaatt | ttttttggtt | ttgatttttg | atgtagttaa | 1980 |
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| gataattttt | ttatataaga | tgtattttgt | ttttgtgggt | tttttgtagt | ttttaagttt | 3060 |
| ttatttgatt | tgtatataat | gatttagtg | gttagaggag | tttagagtta | tgagcgggtt | 3120 |
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| aaaaatttaa | ttttttttcg | aagagtaaga | tgaatgttgt | agaaggagaa | ggaaggggag | 3240 |
| ggagatggat | ggtgtcgat | tttagaattt | ttagatttgt | ttggatgaat | tattatttat | 3300 |
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| aaaaatgaaa | agaacgttta | gggaggaaaa | agggaaatat | aataataggt | agagagta | 3960 |
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| gaattcgtag | gttagttcgg | gcgtagcggg | tggttaaggcg | gaggagtcgc | gcgtttttta | 780 |
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| gttattgaag | tttggttttt | aagttattgt | tttaagttag | tatgatttta | gttttttgga | 1920 |
| attttattta | tttttttcggg | atgggacgtt | agtcgtttcg | ttttttttgt | tgtgatttag | 1980 |
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<212> DNA

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<220>

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<400> 240

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| agtgattggg | aatggatatt | aattgtttgt | taaatgttat | taaatgtttt | tttaaattta | 480 |
| ggggatatag | aaagaggggt | ataaaaggag | aattttaaata | gaaaaaggga | ggattcggag | 540 |
| gtttttgaaa | gcggggggag | aagaaggagg | aggataata | gagaggaata | gagaaggaga | 600 |
| gcggagagaa | gataaataaa | aataaaaaata | ggaattattg | aataattata | tattaaagg | 660 |
| aaagtttttt | tttatggggt | atttaaaata | ttgagattgt | aatagtgatt | tcggttatgg | 720 |
| agaaagatg | ttttttttta | tttttgtttt | cgaaagtttt | tggtttcgtt | attggcgtat | 780 |
| aaatttttat | taggttaaag | agtgtgttta | attgtttgaa | gaatgtagta | gacggaaggc | 840 |
| gggtttcgtt | atgtcgtttg | tttttttcgt | tggagagaat | gaaagaaacg | cgtagagtta | 900 |
| gagatttttg | tcgagttaga | ttttttttcg | tcgttttagg | ttatcggtta | ttcggtaaag | 960 |
| attcgagtaa | ggaacgtagg | gttattgttt | gggttaataa | atggagttcg | tttttttttt | 1020 |
| ttcggacgtc | gttggtcgtt | cgatgttttc | ggtaatttat | tcgcggcgta | tgtagaggag | 1080 |
| tttttttttt | tttttttagat | tatttgtttc | gattaatttg | atttttttaa | tatatattgat | 1140 |
| cgtatttttt | aggtggatat | attaataggt | tacgggttgg | agaggagcgg | gtgatgagga | 1200 |
| gagggattta | aatttgcgaa | cgtttggttt | gggtcggagt | tgccgggggt | ttggggaggag | 1260 |
| agaggggaga | agagagaagg | aaggagagcg | tttgtcggga | tggttgagtt | gttcggcgga | 1320 |
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| gcggttttaa | tattatcgtt | ttttattttt | ttttttgtaa | atttttagag | aaacgttttt | 1440 |
| gggttttttcg | tcgcgatatt | tttagtttgt | atttttttat | agtttaggag | gcgcgttttc | 1500 |
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| ttatttagtc | gcggttcgta | ttcgcggttc | gggtttacgc | gcggaagagg | ggcgttaggt | 1680 |
| cggatttcgt | tttcggtagg | gggcgttttg | gagcggagag | tgaggcgaat | ggtatatgag | 1740 |
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| attcgggtta | gcgtttggcg | agcgagttta | tttgtggttt | tcgcggtcgt | tttttttttg | 1860 |
| tatttttgta | ttttttcgtc | gatttttttt | tttcgggatt | tgtattttgt | tttattaatt | 1920 |
| agttcogat | tggttttttt | tacgtgattt | cgggcgggtt | gaggatttgt | tggtttttta | 1980 |
| gttagagg | gatgcgggcg | gtagagttcg | agaggcgggt | gtcgggttgc | ggggcgtttt | 2040 |
| gatttttttt | ttattttgtt | ttttcgggtt | ttattcgttt | gtttttggat | tttcgttttt | 2100 |
| ttttgttttt | cgggtttttta | gagttttttt | tttatggtag | tagttttttc | cgttttcggc | 2160 |
| gtagtttttt | agcggacgat | tttttcgttt | cggggttgag | tttagttttt | ggatgttgtt | 2220 |
| gaaatttttc | agattatgcg | cgggttttgt | tggtgttttt | tcgtcgggtg | ttattgttat | 2280 |
| cgtcgtcgtt | tttggtgtcg | tcgttcgcgg | gatgtttagt | agttcgttgt | tcggttttcg | 2340 |
| cgattttgtg | tttttcggaa | gtcgttttgt | gtttagaggt | tgtaogaatt | agttatggtg | 2400 |
| ttgtgggagt | tttcgcggta | gtgtagtagt | tggatatttt | gcgaggggtt | ttgttggttg | 2460 |
| ttgttggtgt | tcgttatggt | atttatcgta | gttcgttcgg | tgaagttcgt | tggttttttt | 2520 |
| atttttttaa | gtgattgtta | aacgtttatc | ggttggaatt | gttttggtta | gtttagaatt | 2580 |
| ttcgtttttc | attttttta | ttcgtagaag | aatacgcgta | tttagtatag | attagtttat | 2640 |
| tttagcgcgt | tttttttagtt | ttttattttt | tattgtttta | gattttta | attatttatt | 2700 |
| tttatttaga | gaaataaggg | gaattgttgt | aggttcgggg | gtgaggggtg | gttttgggat | 2760 |
| gggtagaaaag | tgtaggtgta | gtaggaaaat | tttgtatggt | tcggtttata | ttggagttgc | 2820 |
| gaggattttg | agaaatatta | aacgggatgg | ttttttgggt | ttattgtttt | gaaagagtat | 2880 |
| taatttttagg | ggaaatattg | aaatagaagt | tttgttatta | ttaaagaaaa | aagttttatt | 2940 |
| aggatgagga | agaaataatt | ttatgagaaa | gaatgagcga | gaaagtaata | aattaaatgg | 3000 |
| tgattgtagg | ggaatcgttg | atttttggtta | aaggtgttat | gaggtcgtat | tggttttttc | 3060 |
| ttgaagatta | ggttatatag | atttttagagg | agttgggttt | taatagaatt | tttttttttt | 3120 |
| tttttttttt | tttttttttt | tttttttttt | tttttttatt | tatttatttt | tttttttttt | 3180 |
| ttattttttt | tttttttagg | cggtaaaaga | tattgggttt | gtagttttaga | tatgtttttt | 3240 |
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| | | | | | | |
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| ggcggaatcg | atttttagtg | gcgttgattt | ttttattttt | ggataggttt | ttgtggagtg | 3420 |
| ggtttaggtat | tttttttgtt | cggtcgggtt | tttttagatt | ttgacggcga | acgttttggt | 3480 |
| ggtttcggtt | tgttgaggtt | ttttaattaa | atagggttag | aggatgggag | ttgttggtatt | 3540 |
| tttagttggt | atagtatttc | ggtttgatag | ttttagtagt | attgggtaga | attgtgggtg | 3600 |
| aatttttttg | gtatttttaa | tttcgttaat | atgtttgggt | attgtttttt | agggtgtggt | 3660 |
| tgtttttagt | ttagtaagtg | tgtatgtaat | tttttatttt | ttgtgaatat | aattttgttg | 3720 |
| tagttaaatt | tggttttgaa | taaagtgttt | tttaaagatg | tatataagtt | gaagtgtatg | 3780 |
| taatttttaga | gaggagggaa | tgattaattg | taatttaggg | tgaaagtttg | tatagttttt | 3840 |
| agttattatt | gatgtaaatg | ttaaaaggaa | aattattatg | tattatttta | atttattttt | 3900 |
| tataaagata | agttgagata | tgtaatttta | ttagatttgg | gttaatagat | tggttttttt | 3960 |
| tttggttagt | tttaaatttg | gtattttta | aaaattta | atgtttttat | aattttttga | 4020 |
| tttatgcgta | tatgtgtgtt | gtttttgaaa | gaataagttt | tattttgtta | ttgtttaatt | 4080 |
| atttttttaga | tggttttatta | tggttaataat | tatgagtttg | taaaaataat | ttttggaaat | 4140 |
| gttgatgggt | ttgtagttta | atatagattg | gtttgtttta | tttttagttt | ttgtattggt | 4200 |
| ttaggaaata | attaatttta | atgtgaagtt | gatatttgta | attaagaaat | tatatattta | 4260 |
| ttagatattt | taaaggggat | tgtataaatt | aaagagaata | aattggtttt | gtagataggt | 4320 |
| tgtaagaat | ttggtatttc | gtttttattt | ttgttaattt | agaggtgatt | aatttttatt | 4380 |
| tgagttaaat | agattattat | agaaaatatt | gtgtttgttt | atttttatta | ttgaggtttt | 4440 |
| gttttttttt | tggtttggata | tattttta | aagggtgtgt | tttagtcgtt | gaagtaaaag | 4500 |
| ataaattaaa | gatggggaaa | tggtaaaagg | gtatttagag | attattatta | gttttttttt | 4560 |
| aaatgtgga | gtttttgtgt | tataaatatt | gtttatttta | tgagtaaaaa | ataaaaaata | 4620 |
| aaaaaaaaata | ggaagtaaat | gttaagtttt | tattttattt | tgtagtattt | aacgtaagtt | 4680 |
| ttaaaaaata | gtattatttag | aaaaggatat | taaaggagaa | ttgattagaa | aagaattgtg | 4740 |
| gaaaatggaa | acgaatattg | attatttta | tagattttga | ggttattagt | agatagtgat | 4800 |
| ttttagtagt | agttatagtt | gttggattta | aaatttagga | taagtatttt | aaagttttta | 4860 |
| agtagtggtt | ttttttgtta | aaaatttgta | agatgtttta | atgattggag | tggttttttt | 4920 |
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<210> 243

<211> 4930

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 243

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| gtattatt | ttgaagtttt | aaaatatttg | ttttaaat | taaattta | aattatagtt | 120 |
| attgtaag | gttattgttt | attgataatt | ttaaaattta | gttaagtgat | taatattcgt | 180 |
| ttttattttt | tataattttt | ttttagttaa | ttttttttta | gtattttttt | ttgatagtgt | 240 |
| tattttttta | agtttgcgtt | aatattgata | gtggtgaatg | aaagtttaat | atttgttttt | 300 |
| tggttttttt | ttattttttat | tttttgttta | ttaggtggat | aatattttatg | attataaaat | 360 |
| tttatatttt | ggaaaagagt | tagtgatgat | ttttgaatat | ttttttatta | tttttttatt | 420 |
| tttaattggt | tttttgtttt | aacgattgaa | ataatttttt | atttgaaatg | tatttagata | 480 |
| aagaggaaat | aaagttttta | taataaagat | aaataggat | agtgtttttt | gtgatgggtt | 540 |
| gttttggtta | aatgaagatt | gattattttt | aagttaatatg | gggtggaagc | gggtgtttta | 600 |
| gtttttgata | atttatttgt | aaaattagtt | tatttttttt | agtttatgta | gtttttttta | 660 |
| aaatattttg | taaatatgta | attttttgat | tgtaaatggt | aattttatat | ttagtttagt | 720 |
| tattttttta | aataatgtaa | gggttaggaa | tgaagtaaat | tagtttggtg | tggtattata | 780 |
| agttattaat | atttttaaaa | attgtttttg | taggtttata | attattatta | taataaagta | 840 |
| tttaaaaagt | gattaggtta | tagtaaaagt | aaattttatt | ttttaaaaat | aatatatatg | 900 |
| tacgtatgaa | ttaagaagtt | atagaaatat | gttgagtttt | attaaaatgt | taaatttaga | 960 |
| aattgtttaa | aaagagaata | atttattgat | ttaaaattta | tagggttgta | tatttttaatt | 1020 |
| tggttttgta | aaggataaat | tagaatgatg | tataataaatt | ttttttttgg | tatttatatt | 1080 |
| agtaataaatt | aggaattata | taggttttta | tttttagtta | tagttgggtta | tttttttttt | 1140 |
| tttaagttta | tatatatttt | agtttatata | tatttttgaa | agatattttta | tttagagtta | 1200 |
| gatttaatta | tagtataaatt | atatttatag | agatgaaaa | attatatata | tatttgttta | 1260 |
| aattagaata | gatttatatt | aggggataat | atttaggtat | gttaacggag | tttaaaatgt | 1320 |
| taaggaaatt | atattataat | tttgttttag | atattatagg | ttgttaaatc | gaaatgttat | 1380 |
| gttagtttag | agttagtaga | tttttatttt | ttggttttat | tttaatttaga | agtttttagta | 1440 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gagcgaagtt | tgtaaagcgt | tcgtcgtag | aatttgaagg | aattcgagcg | agtaagaaga | 1500 |
| gtgtttgatt | tattttatag | aagtttggtt | agaaatggag | gagtttagcgt | ttattgaagt | 1560 |
| cggtttcggt | ttcggttcgt | ttatatggag | tttgattag | tttagttatg | tttatttcgg | 1620 |
| tttgggagat | tcgtaaagtg | ttttttttt | taattttttt | gtattatttt | gaagtttagg | 1680 |
| gaagtaaaga | gaggggtata | tttggattgt | aaaattaatg | ttttttgtcg | tttaggagag | 1740 |
| aagggaatga | gagagagaga | gagatagata | gatagagaga | gagagagaga | gagagagaga | 1800 |
| gagagagaga | gagagagaga | aattttattg | aaatttagtt | tttttagaat | ttgtgtgatt | 1860 |
| tggtttttaa | cgggagatta | gtgcgatttt | atggtatttt | tgtaggaat | tagcgatttt | 1920 |
| ttttagatta | ttatttgatt | tattgttttt | tcgtttattt | ttttttataa | agttattttt | 1980 |
| tttttatttt | agtaagattt | ttttttttta | tgatgataaa | gtttttgttt | tagtgttttt | 2040 |
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| gcgcgttagg | gtaggttggt | ttgtgttgga | tacgcgtggt | tttttgcgga | gttaaagggt | 2340 |
| cggggacggg | ggttttggt | ttattagagt | aatttttagtc | ggtgggcgtt | tggtagttaa | 2400 |
| ttaaggaggt | agggaaagta | gcgagtttta | tcgggcgggt | tacgatgagt | agtatgacgg | 2460 |
| gtagtagtag | tagttagtaa | aagttttcgt | aaagtgttta | gttggtgtat | tgtagcgggg | 2520 |
| atttttatag | tattatgatt | agttcgtgta | attttgtagt | agtaaacggt | tttcgagtaa | 2580 |
| tataggatcg | cgggggtcgg | gtagcgggtt | attgagtatt | tcgcggacgg | cggtagtaga | 2640 |
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| gtcgggtttt | gattggtgga | gtaggatgta | ggtttcggga | gggaggggtc | gacgaggagg | 3060 |
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| gtagtagggt | agagaggggc | gagtcggcgc | gggagagggc | gttttggttg | cgatcggcgt | 3420 |
| tttagcgtgc | gggagcgcgt | cgtttagggt | gtagggggat | gtaggttggg | aatgtcgcgg | 3480 |
| cggagaggtt | agggacgttt | ttttagggat | ttataggaaa | gagggtgaga | ggcgatggtg | 3540 |
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| tttaattatt | taaaagaggt | atttatatat | tttgaaaacg | ggattatttta | ttttttgtag | 4560 |
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| gtgttttaac | gaaatttttt | tttttttttt | gtgtgaaatt | tattttttta | tttttatattt | 4740 |
| tcgttttcgt | tcgagattgt | tttttttttt | ttttattttt | aaagattttt | gaatttttagt | 4800 |
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<210> 244
 <211> 2501
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<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 244

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| atTTTTgatt | ttagggtgatt | tattcgTTTT | ggTTTTttaa | agtgttgga | ttataggcgt | 120 |
| gagttattaa | gtttgacggg | tagtaattta | ttttttatat | aatTTTTttt | tttttttttt | 180 |
| ggtagagacg | aggTTTTgtt | atgttgTTta | ggttggTTta | aaattatcgg | gtttaagtga | 240 |
| tttgTTTTatt | cggtTTTTtt | aaagtgtagg | gattataagt | atgaattatt | atgtttgggt | 300 |
| gtaattTTTT | atatatttcg | gataattaatt | ttttattaga | taatatagtt | tgtaaatttt | 360 |
| tttttttttt | atTTtgtagg | ttgTTTTttt | attgTTgggt | attTTTTttg | ttgtatagtt | 420 |
| atTTTTaagt | ttgTTgtaaa | tttaTTgttt | tattTTTTgt | ttgTTgttt | gtgTTTTgtt | 480 |
| gttatattta | agaaattatt | gttaaattta | ttgTTatgaa | gtTTTTtttt | atgtTTTTtt | 540 |
| ttaggagtat | tatagTTtta | ggTTTTatgt | ttaatTTTTa | ataagTTTTg | tgTTTTtgta | 600 |
| tatggtgtaa | ggtaagggtt | taattttatt | tttttgatg | tggttatata | gtTTTTttag | 660 |
| tattattttg | taaagatata | atTTTTtttt | tatgTTTTgg | tgTTTTaaaa | aaaaaaaaaa | 720 |
| ttttggttgg | ttacggtggt | ttaggTTtat | aatTTTTagta | ttttgggagg | ttgaggTaa | 780 |
| ggattgTTTT | gaggTTtagga | gttttagatt | agtttggtta | atatggtgaa | atTTtgTTTT | 840 |
| attatcgaa | gatataaaaa | ttagTTaggc | gtggtggagt | acgTTtgtaa | tttttagTTta | 900 |
| ttaggggagg | tgaggTatga | gaatcgTTTT | aatTTgggag | gtagaggTTg | tagtgagTTa | 960 |
| agattttatt | attgtacgtt | agtcgggggtg | atagagTgag | gtagggtTTt | atTTtgTcgt | 1020 |
| ttaggtagga | gttttagTgt | ttaatTatgg | tttatTtag | tttatattgt | tagggtTTtaa | 1080 |
| gttatTTTTt | tatttttagtt | ttttaagtag | ttaggattat | aggtgtgtgt | tattatgttt | 1140 |
| agtaaatttt | tgtattTTTT | gtagagatgg | ggatTTTTta | tgTTgTTtag | gttggtTTTTg | 1200 |
| aatTTTTta | tttaagcgat | ttttttattt | gggtTTTTta | aagtattggg | attataggcg | 1260 |
| tgagttattg | cgTTtgatat | ggtgTTTTtt | aatTTatttt | tattTTTTat | ttttattttt | 1320 |
| ttgagataag | gtTTtgTTTT | gtTTTTtagg | ttggaatgta | gtggtataat | tatggtTTtat | 1380 |
| tgtaattTTTT | gtTTtttcgg | tttaagtgat | ttttttgttt | taattTTTTgg | agtagTTtg | 1440 |
| attatgggta | tatgtttata | cgattagTTa | atTTttgttt | tttttttttt | tttttttttt | 1500 |
| tttttttttt | tttttttttt | ttgagatgta | gtttttttat | gttatttagg | ttggtttaaa | 1560 |
| atTTttgggt | ttaaagcgatt | ttttattttt | ggTTTTttta | agtgttgga | tgataggcgt | 1620 |
| gagttacgtg | gtgtttaaaa | aaggtataata | aaaattTTTT | atatattggg | tatagaagtg | 1680 |
| gtatgggttt | ttatatattg | tgagattttt | ggtatttagtt | ataaattttg | tgtatattta | 1740 |
| agattTTTTa | gagtaggtgt | aattatttcg | ttttatagat | gaggatatag | aggTTgagtc | 1800 |
| gtagtatttt | atttaaggtc | gtatagTTtag | taaatagatg | gaggTTggat | tggaattgag | 1860 |
| gattttattt | aagggtTTTT | ataaattttt | gggggtTTTT | cgTTgtTTta | ttttatttat | 1920 |
| attgaaaga | atgaatgaat | gaatgTTtcg | ggtatcgtgt | ttattTTTTa | gtaaTcgtg | 1980 |
| agTTtgga | gagtttattg | tttcgcgtgg | gggggtgTg | tgTtcgtttt | gcgtatgcgt | 2040 |
| tttttggg | tatggtcggt | ttcgttttat | tttttgTat | agggtatcgt | ttttttcgt | 2100 |
| ttggtatatt | tttttttttt | ttacgttcgg | attggggTgg | tagacgtcgt | ttcgttttat | 2160 |
| cgTTTTtttt | tatcggtttt | cgcgcaaaaa | gtcggggcgt | ttgcgttgTc | gtcgtcgcgt | 2220 |
| ttgTTgaagt | tttcgagatg | tcggcgcgta | tcgttttagt | tcgggtgTtt | atattggtcg | 2280 |
| tttcggttat | ttcgttgTtc | gacgatgTtc | gtaggcggta | ggtattatgg | gggggaatac | 2340 |
| ggatttaggg | ggataggtag | ggcgttgggT | ggggggTcgt | tttttttcgg | ggtggtcggt | 2400 |
| ggtcgTgtt | gatagacggg | cgcgTatgcg | tggggTggtg | cggcgcgtag | cggtagtTgg | 2460 |
| cgcgggtagg | gtggtatttt | cggtcgcgcg | tgTtcgggtt | g | | 2501 |

<210> 245

<211> 2501

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 245

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| gtattatttt | acgtatgcgc | gttcgtttgt | tagtagcgg | tatcggttat | ttcgagggga | 120 |
| agcgattttt | tatttagcgt | tttgtttgtt | tttttagagt | cgtgtttttt | tttatggtat | 180 |

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|-------------|------|
| ttatcgtttg | cggatatcgt | cgggtagcga | gatggtcggg | acggttagtg | tgggtattcg | 240 |
| ggttggggcg | gtacgcgtcg | gtatttcgga | ggttttagta | gacgcggcgg | cggtagcgta | 300 |
| ggcgtttcgg | tttttcgcgc | ggaaatcgat | gggaaggggc | gatgagcggg | ggcggcgttt | 360 |
| attatttttag | ttcgggcgtg | ggggaggagg | ggatgtatta | aacggagaga | ggcgtatatt | 420 |
| tgtgtagaag | gatggaacgg | agtcggttat | gtttagggaa | tacgtatgcg | taaggcgggt | 480 |
| atatattttt | tttacgcgga | gtagtgggtt | cgtttaagtt | ttacggtttg | ttgggagggtg | 540 |
| ggtacggtgt | tgcaggtatt | tattttattta | tttttttagg | tgtgatgggg | ataaagtagc | 600 |
| gagaagtttt | taagggtttg | tgagagtttt | tgagtaaagt | tttttagttt | aatttaattt | 660 |
| ttattttatt | gttggttata | cgatttttagg | tgggttatta | cggtttagtt | tttgtgtttt | 720 |
| tatttgtaaa | acggggtaat | tgtattttatt | ttagaaaatt | ttgagtatat | atagaatttg | 780 |
| tagttagtat | taagaatttt | atagtgtata | gaggtttatg | ttatttttat | atttagtgtg | 840 |
| tgggggggtt | tttggtgttt | tttttaagta | ttacgtgggt | tacgtttggt | attttagtat | 900 |
| tttgggagggt | taggggtggga | ggatcgtttg | agtttaggag | tttttagatta | gtttaggtaa | 960 |
| tatagagaaa | ttgtattttt | aaaaaaaaaa | aaaagaaaga | aagaaagaaa | gaaaaaaaga | 1020 |
| aaaataaaaa | ttagttagtc | gttggtggtat | gtgtttatag | tttaaattat | tttagagggt | 1080 |
| gaggtaggaa | gattatttga | atcggagagg | tagaggttgt | agtgagttat | gattgtatta | 1140 |
| ttatattttt | gtttgggaga | tagagttaaga | ttttgtttta | aaaaataaaa | aataaaaagt | 1200 |
| aagaataaat | taagaagtat | tatgttaggc | gtagtgggtt | acgtttgtaa | ttttagtgtt | 1260 |
| ttgagagggt | taggtgggag | gatcgtttga | ggttaggagt | ttaagattag | tttgagtaat | 1320 |
| atagggatat | tttattttta | taaaaaatat | aaagatttgt | tgggtatggt | gatatatatt | 1380 |
| gtaatttttt | gttattttggg | aggttgaggt | gggaggatgg | tttgaatttt | ggtagtgtag | 1440 |
| ttgtaatga | gttatgattg | ggttattgga | ttttgtttg | ggcgataggg | taagattttg | 1500 |
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| tttttttaggt | ttaaagcatt | tttatgtttt | agttttttta | gtagggttggg | attataggcg | 1620 |
| tattttatta | cgtttggtta | atttttgtat | tttcggttgt | agagataggg | ttttattatg | 1680 |
| ttggttaggt | tagtttggtg | tttttagttt | taagtagttt | atttggttta | gttttttaaa | 1740 |
| gtgttggtat | tataggttta | agttatcgta | attagttaga | attttttttt | tttttaaagt | 1800 |
| attagaatat | gggggaaaga | ttgtgttttt | aataaatggt | gttgagaaaa | ttgtataatt | 1860 |
| atatafaaaa | gaatgaagtt | ggatttttat | tttatattat | atataaaaaat | ataaaaattta | 1920 |
| ttaaagatta | aatataagat | ttgaaattat | agtgttttta | gaagaaaata | tggggaaaaa | 1980 |
| ttttatgata | atggatttgg | taatgatttt | ttggatatga | tagtaaaata | taggtaataa | 2040 |
| gataaaagat | agataaatgg | gtttgttaata | aatttaagga | tagttatata | gtaaaaagaaa | 2100 |
| tgattaatag | tgaaaaggta | atttatagaa | tggggaaaaa | aaaagtttgt | aaattgtatt | 2160 |
| atttggtaaa | gggttaatat | tcggaatata | tgaaaaatta | tagttaggta | tgggtggtta | 2220 |
| tgtttgtgat | ttttgtattt | tgggaggttc | gggtaggtag | attatttgag | ttcgttagtt | 2280 |
| ttagattagt | ttgagtaata | tggtaaaatt | tcgtttttat | taaaaaaaga | agaaaaaaat | 2340 |
| tatataaaaa | ataaattatt | attcgttagg | tttggtggtt | tacgtttgta | atttttagtat | 2400 |
| tttgagaggt | taaggcgggt | ggattatttg | aggttaagag | tttgagatta | gtttggttaa | 2460 |
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<210> 246

<211> 3814

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 246

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| gggagggggt | gttaagtgtt | ttgtttattg | gttgtttttc | gaatttttgt | tattttacgt | 120 |
| ataaatatat | ttatatattt | tttttgttta | gtttatatat | tgagttattc | gtatatgcga | 180 |
| gtatattttt | tttttttttt | ttattttttc | ggtttttgat | ttttataagt | ttatggaata | 240 |
| tttttgaaa | gacgtttttg | atttagtagg | gtaggtttgt | tttgattttt | ttttttgtag | 300 |
| tttttagtatt | ttgagaaagt | aattttattt | tttggttagt | gtttgtattt | tagtagggag | 360 |
| atgaggattg | ttgtttttta | tgggggtatg | tgtgtgtttt | tttttttttt | taggatttgt | 420 |
| aggatttttt | gtgttatttg | tatataattt | ggtaggttta | tattttttta | gagttttatg | 480 |
| aagtgttttt | tgtatgtgtt | ttaaaaaggt | atttgaaaat | tgaaagtgtg | atttatggaa | 540 |
| attaaattat | ttgtaaaaaa | ttgttttgga | aagtaatgat | tgttggttat | aaagggaaat | 600 |
| atttgcgatg | tatttaattg | gttttttaatt | ttttatttgt | tgataattta | tagttattaa | 660 |
| tgttaaatcc | gatttttggt | ttagtattat | ttgtatattg | tttaataatg | gtttattttt | 720 |
| gtaagaatta | gataaaatgt | atatttgata | taaaatagtt | aaaaatgtaa | tttttagtaa | 780 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| tagtaagttt | ggtattttaga | tagattatga | atatttcggt | agatattttg | ttgggtggtt | 840 |
| gggtagtaa | ttaaaataaaa | gtattgatag | ttgtattaga | gtttattagg | ttgtagtaaa | 900 |
| ggaagtttat | ttaaaagtat | aaattatttta | agattataga | cgtatgatat | attttatttta | 960 |
| ttttttgttt | ttttaatatg | tatatatata | tatatatata | tatatatata | tatatatgtg | 1020 |
| tgtgtgtatg | tgcgtgtgta | tgtttaattt | tttaatttagt | taaaaatttt | tttttatttg | 1080 |
| ttttttattt | ggatatttga | ttttgtatat | tttagtttaa | gtgaatcgag | aagatcgagt | 1140 |
| tgtaggatta | aaggatagat | atgtagaaat | gtattttaaa | aatttgtag | ttggattaga | 1200 |
| tcgataatgt | aatataattg | ttaaagtttt | ggttcgtgat | ttgaggttat | gtttggtatg | 1260 |
| aaaaggttat | atttttatatt | tagttttttg | aagttttggt | tgtataatta | atttgtggaa | 1320 |
| ggtatgaata | tttatgtgcg | ttttaattaa | aggttttttt | gaattatttt | ttatatgaga | 1380 |
| atttttaatg | ggattaagta | tagtattgtg | gtttaatata | aatatataag | ttaggttgag | 1440 |
| agaatttttag | aagggtgtgg | aagggtttat | ttattttggg | agtattttgt | agaggaagaa | 1500 |
| attgagggtt | tggtaggttg | tatttttttg | atggtaapaat | gtagtttttt | ttatatgtat | 1560 |
| attttgaatt | ttcgtttttt | ttttttttaga | tgttttttgt | tagttttttt | agttgttaaa | 1620 |
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| cggttatagt | gtagtttttt | ttagggttat | tttatgtata | tattacgtat | tttttagttaa | 1740 |
| cgaggagggg | gaattaaaat | gaaagagaga | taaatagaga | tatatcggag | tttgggtacgg | 1800 |
| ggtatataag | gtagtatatt | agagaaagtc | ggtttttgga | ttcgtttttc | gcgtttattt | 1860 |
| taagtttagt | tttttttggg | ttatttttag | tagattttcg | tgcgttttcg | ttttttggtc | 1920 |
| gtgaaattta | gttttttatt | agtagcgacg | ataagtaaag | ttaaagtttag | ggaagttggt | 1980 |
| ttttgggac | gtttttaaat | gagttgtgtt | tggagtgtat | tttaagttaa | tgttagggta | 2040 |
| ggtaatagt | ttttggtcgt | tttttagtat | ttttgtaatg | tatatgagtt | cgggagatta | 2100 |
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| gtcgtcgtag | ttgtcgtttt | ttttgtagtt | ttacggttag | taggtgtttt | attatttggg | 2760 |
| gaacgagttt | agcgggtata | cgggtgcgca | ggtcggttcg | tcggtatttt | atagggtatto | 2820 |
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| agagttaagt | tttttcgtcg | ggtagttgaa | aaaaacgtat | tttttattta | tttatcgttc | 3060 |
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| ttaaagtagta | gttatttgtg | ggggaataa | tttttaggta | aataaatacg | gggcgttttg | 3180 |
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| tttagtaga | gttttattta | tttttttaat | gtttttgttt | aatgtgtttt | ttaaattttt | 3300 |
| ttttatttag | attatttgat | tggaaatatg | ttagttatga | tgatgatttt | ttgggaagcg | 3360 |
| atttttgtta | ttcgtttttt | tttttttttt | attttacgtt | ttgggggttt | agagagcgat | 3420 |
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| ggttgtgtgt | ttttattttt | attttttttt | ttataagaat | tgtttttttt | tttttttttt | 3780 |
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<211> 3814

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 247

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| ttttgtgtt | tggatcggc | gcgtttttt | tatagtgggt | gcgagggcgt | gatttttgggt | 180 |
| gattcgtacg | ttatttcggg | gtattttttt | cgggtgggat | aggtttgtta | ttgggttgggt | 240 |
| aggagattat | ttttaagtat | ttgtgttttt | atatggtttg | ttttaaatc | gcgggatatt | 300 |
| tataaatttt | cgggtgttag | aagttatatg | ttagtaattc | gttttagcgc | ggatttagtt | 360 |
| agttaatttc | gaaattagat | ttatttaatt | tttaatcgtt | ttttaaagtt | ttaggacgtg | 420 |
| gggtggggag | gaggggaaag | cgggtgatag | gaatcgtttt | ttagaaagtt | attattatag | 480 |
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| aaatattaaa | aggataaata | aaattttgtt | gagttttgtt | aattttaaat | atttttaatt | 600 |
| ttaaatgtta | agagcgagat | ttttttaagt | gatttaaagc | gtttcgtgtt | tatttgtttg | 660 |
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| tttttttagt | tggtcggcga | gagaatttga | ttttgaacgt | agcgcggtt | gtacgtagaa | 840 |
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| cgggtttcgt | agtttttttag | gttttttttt | tttttttttt | tttttttttt | tttttgtcgg | 960 |
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| gtttttgggt | tttcgggttt | tttaattttt | gtattgggtt | ttcgagttaa | tatgtattat | 1740 |
| aaaggtgttg | gaggacggtt | agggattggt | gttttgtttt | gatattgggt | ttaaataatt | 1800 |
| tttaggtata | attcgtattg | gagcgatttt | aaagagttag | ttttttgaat | tttattttat | 1860 |
| ttgtcgtcgt | tggttgatag | agggtgagtt | ttacgggttag | ggggcggggg | cgtacgagga | 1920 |
| tttggttaaag | gtgggttagg | gaagattggg | tttaaaataa | acgcgaaaga | cggatttagg | 1980 |
| ggtcgggtttt | ttttaatgtg | ttgttttatg | tggttcgtgt | tagatttcga | tatatatttg | 2040 |
| tttggtttttt | tttttgtttg | attttttttt | ttcgttgggt | agaaatacgt | agtgtgtata | 2100 |
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| tttagaaa | attgaatata | aaatgtgatt | tttttatatt | aaatataatt | ttaggttacg | 2580 |
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| ataattatta | atattttgtt | tttaattgta | ttttaaatat | ttaatagagt | atttgacgaa | 3000 |
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| atattttaa | atatatgtaa | aaatatttat | aaggagaatt | aatgagtttt | taattaggtg | 360 |
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| gtataagtaa | tttggagttt | atagaagggg | gtaataatta | tttaagttta | atgattgttt | 1860 |
| ttgaagttaa | taaatgtagt | atttggaaaa | atagggacgg | acgtagggta | tttgtttatg | 1920 |
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| | | | | | | |
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<212> DNA

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<220>

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| gg | at | at | at | tt | tt | 240 |
| tg | at | at | at | tt | tt | 300 |
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| tg | at | at | at | tt | tt | 420 |
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<211> 2944

<212> DNA

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<220>

<223> chemically treated genomic DNA (Homo sapiens)

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| gatattgacg | gttgggatgt | ttgataagga | attttttttc | gttatattga | gaaatattcg | 1920 |
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<220>

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| aacggtaata | gtttattgtg | aggatgggaa | tattttatag | ttgtgttggt | taaatcgggtg | 180 |
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| tgtttcgggt | ttttaaaagcg | ttgggattat | aggtatgagt | tatttatattc | ggtttatattt | 1860 |
| ttgtattttt | aggattcggga | ttatttggtt | ttttcgtagg | ttgaattgga | agatttgatt | 1920 |
| ttattttcga | attcgttggt | tttgtaatat | gtttaatata | aggttgaata | gggtttgttg | 1980 |
| taagatttat | aaaattttta | aatggattta | gtgagagttg | tttttatggg | ggttttgttg | 2040 |
| tttttagaag | gtgtttgagt | agtaaataga | agtaattttg | gattaggaaa | aggggtgggtt | 2100 |
| tcgtttgggt | tttttagggat | tattttagtt | tgataattag | taatttttag | ttgtagaagg | 2160 |
| aggttttatt | aatgtagata | gatttttaaag | tttttgtttt | aagtttaatt | cgtaaaagaaa | 2220 |
| tacgtttgtg | atttttatta | ataatagttg | ttatttttat | aatattttat | gagttaggta | 2280 |
| ttttgttttg | ggtttttaag | taatatattg | tttaatttta | tagtaatttt | gtaaattggt | 2340 |
| tagtattggt | agatgaggat | attgaattaa | gtagttaagt | aatgtgtttg | gtagtaagggt | 2400 |
| ttaggtttga | attttagttt | atttgatttt | atatatttaa | tttaatttggt | atttatttat | 2460 |
| tttataaatt | agaataatat | gttttggttt | ttttttgtgg | gggaggggtg | ttttattagg | 2520 |

| | | | | | | |
|-------------|------------|-------------|------------|-------------|------------|------|
| agtggattaa | tgagaattcg | tggtatgtta | tataagtttt | agaaataata | ttttttgtta | 2580 |
| ttttatatag | ttttttatat | ttttatgttt | tttgtttttt | ttgtattagg | gatttgaat | 2640 |
| ttattagttt | tattataata | gattttttta | tttatttttt | tttagttag | ttgtttaatt | 2700 |
| tattatttgt | atttaattta | taatatgttt | taattttttt | taaaaatatt | atttttagtt | 2760 |
| gggtatgggtg | gtttacgttt | gtaattatag | tattttggga | ggttaagggtg | ggtagattat | 2820 |
| ttgagggttag | gagttcgaga | ttagtttggt | taatatggta | aaattttgtt | tttattaaaa | 2880 |
| atataaaaat | taattgggtg | tggtgggtatg | tgtttgtaat | tttagttatt | tgggaggttg | 2940 |
| aggt | | | | | | 2944 |

<210> 256

<211> 3862

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 256

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| tttatgtttt | gttgttttta | gtcgaatttcg | gttcgttttcg | cgtttcgggt | tgggttaggg | 120 |
| gtacgcggg | gttcgggggtt | tttcgtttta | cgggatggga | gaggtcgggt | gatagtttcg | 180 |
| ggttttataa | attatttagg | cggtcgtcgg | gtcgggattt | tatgaatgaa | aaagtagttg | 240 |
| ggtcgttttt | gtgcgcgggt | tgatgttatg | aggtttgggt | atgcgggggt | taacgcgatt | 300 |
| gtgggtgttc | ggggagtggg | ggggggtaacg | atcgtagggtg | ttttttgttg | gggtaattta | 360 |
| tcgtttttta | tgccgaattc | gggggtaatt | attttttttag | gattcgggaat | attagtaatt | 420 |
| ttaattttcg | gcggggggagg | gggcgcggga | ggaattttatt | ttgaaagggtg | gggggtggggg | 480 |
| gggtcgtatt | ttgttgtag | tattttggcg | aaggggagag | ggtttttttt | attagttttt | 540 |
| tttgagtttt | tattgttaag | agggtagcgt | ggtttgatga | tattgaatta | tatttaaaaag | 600 |
| gaagtaaatg | aatagttttt | ttaatgtggg | gtaggtattg | taaaaataaa | aataaaaagt | 660 |
| aagatagtaa | aatgtttttt | tatttttttaa | tgtattaaag | agatagaatt | tgtaatttta | 720 |
| aaaattgtgt | attttaattt | atatttgttt | aagtttgoga | taatatggg | gattttttta | 780 |
| tgtaattacg | aatatttatc | gattttgtta | aaaattagat | tagtatattc | gtttgtttta | 840 |
| ttgataattg | ttttgaatta | tgtcgggttt | tgtagttttt | tttacgttta | cgaatttagt | 900 |
| tttagggtaa | atttttaaagg | tgaagggacg | tttatatttt | taataaaatt | aattaggaat | 960 |
| tttcgggtgt | tttgttttag | gtagagggga | ttaatatttt | tagtaattta | attttttttt | 1020 |
| taattaaaaa | aaatgagta | gaatggagat | tattgttttt | tagtttttta | tttagagggtg | 1080 |
| tgtttttttc | ggttaaaattg | tcggtagcggg | aagggagggg | gtgtagttgg | ggattttcgt | 1140 |
| aaggatcgat | tggttaagggt | aggaaggtag | ttcgaaggat | tttttaggtta | gaaggataag | 1200 |
| atgaaggaaa | tggttggttat | tattttgggt | tgttgttgga | attttcgggt | attttattta | 1260 |
| ttttattttt | tgagcgagcg | tatgttaagt | tgaatttttt | ttaattttta | ggggttattt | 1320 |
| ttttgggtat | ttgtaacgac | gtttttgtgc | gtcggaaatga | aatttgtata | gggggttggt | 1380 |
| gttcgggtttt | tttcgttttt | gtatgttaaa | ttagtttttg | taattttatac | gtgttaaatga | 1440 |
| aatgaaaga | agatgtagtc | gttgagattt | tttggtcgtt | tggtcgttcg | tgggtgtttt | 1500 |
| cgtggcgttt | ttggaaatgc | gtttattttg | tcggtttgga | tatgggggtg | cgtcgcgttt | 1560 |
| tagttatttt | ttttcgtggg | tttttttaggt | tgctgtgtgt | ttgtcgggtt | tttttagttgt | 1620 |
| tttttattgt | agagttattt | ttattttatt | tttttaattt | cgggggattt | attcagagcg | 1680 |
| gacgggggtt | tttgtatttt | tttttttttg | cggggagaaa | ggttgtagcg | gggcgatttg | 1740 |
| tatttttatg | aaaatcggat | tataggggta | atttcgtcgt | agggtaggcg | cggcgtttta | 1800 |
| gggatgggtt | ttgggttttg | tttttcgttg | ttttcggcgt | ttggcgttcg | cgtttttttt | 1860 |
| ttttgcgttc | gttttcgttt | tttttcgttt | tttatttttt | gtcgggtttt | gattttttgt | 1920 |
| taataatagt | aacgttatatac | ggattatagg | ggagttttgt | tgaagttgta | aagttttgga | 1980 |
| gttttttagag | ggttggtcggc | gtagtagtag | cgagtagtag | agttcgtacg | tttcggcgag | 2040 |
| gggtagaaga | gcgcgaggga | gcgcggggta | gtagaagcga | gagtcgagcg | cggatttagt | 2100 |
| taggatttat | agtttttttt | agttgtttag | gaagagtttt | agttatggaa | tattagtttt | 2160 |
| tgtgttgcca | agtggaaatt | attcgtcgcg | cgtatttcga | tgtttaattt | tttaacgatc | 2220 |
| gggtgttgcg | ggttatgttg | aaggcggagg | agatttgcgc | gttttcgggtg | tgttatttta | 2280 |
| aatgtgtgta | gaaggagggtg | ttgtcgttta | tcggaagat | cgtcgttatt | tggtatttgg | 2340 |
| aggtgcgggg | ttgggggagg | tttttttaag | atttttttgt | aatttgttgt | tttagatttac | 2400 |
| gtttttttgt | tattttatttt | tttttttttt | ttttcgttag | aattttgaag | tttgcgtgg | 2460 |
| tggttttttagg | gattcgtatt | tttaaaaataa | aaattgcggg | tattttttga | aggaggaagg | 2520 |
| ggtgggggtg | ggggtgttag | aagtagcgtt | tcgtgggagg | ggagaagggg | gttcgggagg | 2580 |
| ggtgttttcg | ggagaagtta | gtgttagggg | tatttttaag | gggttcgagg | tgcggtttgg | 2640 |

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|------------|------|
| taggttgggt | gcgttttgtg | tttttcgttt | gcgttttagt | tcggttgcgt | tttagcggtc | 2700 |
| gggagtcggt | aatttcgggg | ggagggggta | tagatttgat | ttttaaatta | atatttatgg | 2760 |
| atacgtatgt | aagggtcgtt | cgtgttagta | ttatgcgtta | tttttgtttt | tttattgtaa | 2820 |
| agtaaaagt | tttattaata | attgggggta | gggtgggggc | ggggagcggg | cgtcgggcgt | 2880 |
| tggggtcgt | gttaagggtc | gcgcggttgt | cgggagttcg | cggaaggggc | gtaggacgc | 2940 |
| ggatggtgta | gttttggggg | gacgtcgtta | gggaaggggg | gggttttggt | taagtagcga | 3000 |
| gtttcggggc | gtttcgaacg | ggtagtttgg | gtcggagagt | acggcgagtt | gtaaggtcgc | 3060 |
| gtggttttta | agacgttagg | gtttgatttt | cgtttgtagg | gatatcgggt | tggaggattt | 3120 |
| ttttcgagcg | agtcgggggt | ttgggagtat | attttttagat | tttcggtggg | cgtttgaggg | 3180 |
| gttcgttaagt | attttaaaat | aatttttgaa | agtgcggcgt | gggtgttttg | cgagagggaa | 3240 |
| acgtcgttcg | cgtttagggg | gaaggggggg | tttcggagtt | tgaatttttg | gggttttttt | 3300 |
| cggagtttgt | aacgaatttt | taatttttcg | tttgggtaaa | gggtcgttcg | agggttattt | 3360 |
| ttagggtttt | tttatgtatt | tagttatttt | tttaaatatt | ttaaatattt | tttgaaga | 3420 |
| tgacgttttg | ggaaatgcgg | cgcgccggtt | tgggacgtta | tttttggtgt | tcgtaggcgc | 3480 |
| ggcgtttaat | ttcgcggttc | gtttcgcggt | ttcgtatttt | agttggtgtc | gatttttagt | 3540 |
| tagagggatt | acggagtttt | agggcggttt | agggtttcgg | gggtcggtag | ttcgcgtcgt | 3600 |
| cgcgtacgtc | gttttagttgt | gttcgttttc | gtttttatcg | tgtagttttc | gcggggattt | 3660 |
| tttttttag | tttcggggag | gggtgggtatt | ggggacgcgc | gggggagggg | gcgtattacg | 3720 |
| ggaagttttt | gtcgttttta | gtttcgtatt | ttcggcgttt | tttagatttg | gcggttttgt | 3780 |
| taagcgcgat | ggggggtgcg | ggggcggtgc | ggggggcggc | gcgatttggc | ggcggcgggt | 3840 |
| cggttttcg | tgttttcgt | gg | | | | 3862 |

<210> 257

<211> 3862

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 257

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| tttacggagg | tacgggggttc | gtgatcgtcg | tcgttaggtc | gcgtcgtttt | ttcgtacgtt | 60 |
| ttcgtatttt | ttatcgcgtt | tggtagggtc | gttaggtttg | gagggcgctc | aggggtcggg | 120 |
| gttggggg | gtaggagttt | ttcgtgatgc | gttttttttt | tcgcgcgttt | ttagtattta | 180 |
| tttttttoga | aattgaaagg | gaaagttttc | gcgaggttgg | tacgggtggg | gcgggagcgg | 240 |
| gtatagttgg | gcggcggtgc | cggcggcgcg | ggtgtcgggt | tttcgggatt | ttggttcgtt | 300 |
| ttggagtttc | gtgggttttt | tgattggggg | tcgatattaa | ttgggggtgc | gggtcgcgga | 360 |
| acgggtcgcg | gggttggg | tcgcgtttgc | gagatataaa | gggtggcgtt | taggtcgtcg | 420 |
| cgtcgtattt | tttttagacgt | tatttttttt | aaaaatattt | aaaaatatta | aaaaaataat | 480 |
| aagtgtata | aaaaaatatt | gaaaatgatt | ttcgggcgat | tttttattta | ggtcgggggt | 540 |
| gggagttcg | ttataggttt | cggggggagt | tttaggaatt | ttaaatttcg | gggttttttt | 600 |
| tttttttggg | cgcgggcggc | gttttttttt | cgtaagggt | ttacgtcgt | tttttaaaaa | 660 |
| ttatttttaa | atatttgccg | gttttttagg | cgtttatcga | aggtttgaaa | atgtgttttt | 720 |
| aggttttcgg | ttcgttcgga | gaagggtttt | taagtcgata | ttttttaga | cggggattaa | 780 |
| gttttggcgt | tttgggggtt | acgcgatttt | gtagttcgtc | gtgttttttc | gttttaggtt | 840 |
| ttcgttcggg | gcgttttcgg | attcgttggt | tgaataaagg | tttttttttt | tttagcggcg | 900 |
| tttttttaaa | attattttat | tcgcgttttt | gcgttttttt | cgcggttttt | cggtagtcgc | 960 |
| gcggttttta | gttgcgggtt | tagcgttcgg | tcgtttttat | tcgtttttat | tttggtttta | 1020 |
| attattaata | aatatttttt | ttttgtaata | aaagagtaaa | gatggcgat | aatattggta | 1080 |
| cgagcgggtt | ttgtatacgt | gtttatggat | attaatttaa | aaattaaatt | tatgtttttt | 1140 |
| tttttcggag | ttggcggttt | tcggtcggtg | aggcgtagtc | gggttggggc | gtaggcggg | 1200 |
| gatataaagc | gtatttagtt | tggttagttc | tattttcggg | tttattgggg | gttttttggt | 1260 |
| attggttttt | ttcgaaggta | tttttttcgg | attttttttt | ttttttttac | gaaacgttat | 1320 |
| tttttagtatt | ttttatttta | tttttttttt | tttttagaaa | tattcgtaat | ttttattttg | 1380 |
| aaaatacgg | tttttagaaa | tattacggta | aattttaaag | ttttagcggg | agagaaggga | 1440 |
| ggggggtgag | tagtaaaaga | acgtgggttt | gggtaataag | ttgtagggaa | gttttaagag | 1500 |
| agtcgttttt | agtttcgtat | tttttagtatt | taggtggcga | cgatttttcg | tatggacggt | 1560 |
| agtatttttt | tttgtatata | tttaaagtag | tatatcgagg | gcgcgtaggt | ttttttcgtt | 1620 |
| tttagtatgg | ttcgtagtat | tcggtcggtg | aggaggttgg | tatcggggt | cgcgcgcg | 1680 |
| atggttttta | tttcgtagta | taggagttgg | tggttttatg | ttgggggttt | ttttgggtag | 1740 |
| ttggggaggg | ttgtgggttt | tggttgggtt | cgcgttcggt | tttcgttttt | gttgtttcgc | 1800 |
| gttttttcgc | gtttttttgt | ttttcgtcgg | agcgtgcgga | ttttgttgtt | cgttgttatt | 1860 |

| | | | | | | |
|--------------|-------------|-------------|-------------|-------------|------------|------|
| gcgtcgatag | ttttttggag | gttttaggat | tttgtaattt | taataaaaatt | ttttttagt | 1920 |
| tcgtgtgacg | ttattgttgt | taagtaaaga | ttaaagttcg | gtagagaatg | ggagcgggag | 1980 |
| gggggcgggg | gcgggcgtag | ggggaggggg | cgcgggcggt | aaacgtcggg | agtagcgagg | 2040 |
| ggtagagttt | aaaagttatt | tttgaggcgt | cgcgtttggt | ttgcggcgga | gttgtttttg | 2100 |
| tagttcgggt | tttatagaaa | tgtaaatcgt | ttcgtttag | ttttttttt | cgtagggaa | 2160 |
| gaggggtgta | gggggtttcg | ttcgtttcga | gtgggttttt | cgggatttag | ggggtagagt | 2220 |
| ggaggtgggt | ttgtagtagg | ggataattag | gaaggtcggg | aggttatagc | tagtttgggg | 2280 |
| agattacgag | aaggggtgat | tggggcgcg | cgatatttta | tatttaagtc | ggtagaatgg | 2340 |
| gcgtattttt | aagaacgtta | cgagggtatt | tacgggcgga | tagacggtta | aagaatttta | 2400 |
| gcgattgtat | ttttttttat | ttttattaat | acgtgtaaat | tgtaagaatt | aatttagtat | 2460 |
| gtaaggacgg | ggaggatcgg | gtatataaatt | tttggtgaag | ttttatttcg | gcgtataggg | 2520 |
| gcgtcgttgt | aaatgtttta | gggggtaatt | tttaaaagtt | aaagggattt | tagtttagta | 2580 |
| tgcgttcggt | taaaaaataa | aataaaataa | atgttcgaaa | atttttagtag | tagtttaaga | 2640 |
| tgggtgggttag | tatttttttt | attttgtttt | tttagtttgg | agatttttcg | ggttgttttt | 2700 |
| ttattttgat | tagtcgggtt | ttgcgggggt | ttttaattgt | attttttttt | tttcgtgtc | 2760 |
| ggtaatttaa | tcgggagaaa | tatatattttg | aatggaaagt | tgagaaatag | tgatttttat | 2820 |
| tttgatttat | tttttttaat | taaaaaagaa | attaaattgt | tggaaatatt | agtttttttt | 2880 |
| gtttgggata | agattatcga | aggtttttaa | ttggttttgt | tgggggtgta | gacgtttttt | 2940 |
| tatttttaga | atttggtttg | ggattgaatt | cgtgagcgtg | agggggttgg | taggagtcgg | 3000 |
| tataatttag | aataattatt | aattaaataa | acgagtgtat | tgatttgatt | tttagtaaaa | 3060 |
| tcgataggtg | ttcgtgggtta | tatgagaggg | tttttaatat | tatcgtaaat | ttaagtagat | 3120 |
| ttaaattaaa | atatatagtt | tttaaaatta | taggttttgt | ttttttggtg | tattaaaaaa | 3180 |
| taaaaggata | ttttattggt | ttaatttttg | tttttatttt | tatagtattt | gttttaaat | 3240 |
| aagaaaattg | tttattttatt | tttttttgaa | tatagttag | tgttattaaa | ttatcgtatt | 3300 |
| tttttaatat | taaaagttta | aagaaaattg | atagaaaaag | tttttttttt | ttcgttaggg | 3360 |
| tgtttatagt | aagatgcgat | tttttttatt | tttatttttt | agggtgaatt | tttttcgcgt | 3420 |
| tttttttttc | gtcgggaatt | aggattatta | atatttcggg | ttttgggggg | gtaattattt | 3480 |
| tcggatttcg | tatggggagc | gatgggttgt | tttagtaggg | agtatttacg | gtcgtgtttt | 3540 |
| tttttatttt | tcgagtattt | ataatcgctg | tggttttcgt | atagttaagt | tttatagtat | 3600 |
| tagttcgcgt | ataagggcgg | tttagtttgt | tttttatatta | taaaatttcg | attcggcggt | 3660 |
| cgtttggatg | atttatgggg | ttcggagtta | ttattcgggt | ttttttattt | cgtggggcga | 3720 |
| gggggttcga | gtttcgcgtg | cgttttggtt | tagttcgagg | cgcgaaagcg | gtcgaagtcg | 3780 |
| gttaggggta | gtaggggtata | aagagggttcg | tttatttcgg | tataatcggg | tttggtttaa | 3840 |
| ggagggaggt | ttattttttt | at | | | | 3862 |

<210> 258.

<211> 2358

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 258

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| tagttatata | atatgagtga | gttttagaaa | tttggtgaat | aatttagtga | ttatagttaa | 120 |
| taataagatt | ttgtgaattt | aaaaatttaa | agagagtaga | ttttatgtga | agcgttggtt | 180 |
| ttataaaaa | aaaataatgg | gatataagga | aaatttggag | gtaatggata | tgttttattt | 240 |
| ttggtttgta | gtaatgataa | cgtgagtgtt | tgtatatatt | tgtttaaat | tattaaattg | 300 |
| tgaatattaa | ttatatgtag | tttttggat | attagttgta | ttttaataaa | gttgaggggg | 360 |
| aaagtgat | tattgtaaat | aaataatttg | gttttatgac | gggtggagaa | attattttag | 420 |
| agagtgtatt | agggaagatt | tttttaagga | gaagatttga | gaagggaagt | aggattttta | 480 |
| taaagtgaga | gattaatata | gtagataaat | taggatagat | tatttttagt | tgggagaggt | 540 |
| gggaatgggg | gaagaagttt | agtaagaaga | agtttttag | aaaaggttta | gtatgggtat | 600 |
| ttttaggatt | tgtaaagagg | ttggtatagg | tggatagag | tgggggtagg | gtaagaaagg | 660 |
| aagttggaga | gtttattaga | atggattatt | tagggttttg | taggtaattg | taatgagtta | 720 |
| gaaatgtatt | tggtgtttat | tttttaaat | atatttggaa | atatatatga | attttattta | 780 |
| gttattggga | gatattggaa | agtttttaagt | aggggaatga | tttgaattga | tttagatttg | 840 |
| tatttggttt | tggttggttag | ggtgtggaga | attgattata | gatatagtaa | gagtgtaggg | 900 |
| agatatttta | gaatattttt | tggttttttt | ggttatgtag | atttggatat | ttttcggata | 960 |
| aggtaogaat | attttatttt | agtagtttat | tgtttggttt | ttttttattt | attttgttta | 1020 |
| atttaaat | aagattttgt | tatttttttt | ttgtattaat | ttaagttggt | ttttgtta | 1080 |

| | | | | | | |
|------------|-------------|------------|-------------|-------------|-------------|------|
| ggagagtaat | ttatatatatt | atagttgatt | tatatattatt | ggagtttatt | taagggagga | 1140 |
| tattattttt | tatatattgtt | tatgtttta | ttttgttttt | gaagaaagaa | taagtaaaaa | 1200 |
| ttaaaaggta | gaaatgaaat | ttattggtag | atagtttgg | gttatatttt | gggtttggta | 1260 |
| gttaaagatc | gattttttag | ttaatcggtt | atgttatatta | tagatttttag | atattgtatg | 1320 |
| gaaaagtatt | gtgaaaattt | ttgttttggt | ttgttttgat | ttgattatta | gtgatgtag | 1380 |
| tttttagtta | tgtatttggt | gtttgtttta | tttaattataa | tttttttacg | tagatttttt | 1440 |
| tagagtgtg | agtttttaaa | agggatagga | attgtttatt | tagagagttt | agtttttgag | 1500 |
| ataggagttt | tgtcgatgtt | tttggtcgaa | taaatttttt | ttttttttaa | ttcgggtattc | 1560 |
| gaggaatttt | gtttgtagtt | tgttttgtta | tatttttttg | ttttttgatt | gggaagttag | 1620 |
| gtgattgggt | gatggtcgag | gtagtttttt | aggtgattta | agtttgtttt | gtggaatatt | 1680 |
| tcggtgggg | attttggtta | gttcgagtaa | cgtggatttt | gagagtattt | ttaggttaggt | 1740 |
| atttgtttcg | gtgggacggt | ttgttagagt | agtgtgtggt | aggttttcgt | ggaggattaa | 1800 |
| tatagtgggt | gaatattggg | aaggaattgg | tatttgaggt | ttggatattt | gaaatttggt | 1860 |
| aagattagtt | tttggaaatt | gtttatttta | tttgagtaga | agcgtgggtt | gtttattttac | 1920 |
| ggtgtgtttt | tattgggtatt | ttgggttttg | ttttgggttt | gatttggttt | gaattgtttg | 1980 |
| ataggattgg | ttttgggaat | ttgtttattt | tatttgagt | gaagtattgt | ttgattatcg | 2040 |
| atggtgtgtt | tgtatcggt | ttttgggttt | tggttttgat | ttgatttgga | ttgtttgata | 2100 |
| ttttgggttt | gtttttgatt | tggtttgaat | ttttggatat | tttgattttg | gttttgattt | 2160 |
| ttgtttgggt | taaattgtaa | aagtgtgtgt | gtgttttttt | tatcgggttt | ttgttttggt | 2220 |
| gtgtgtatgt | ggtgtgagcg | tggtgttttg | ttttaaagaa | gtatgggtta | ggtataaata | 2280 |
| gtttattttt | attaggaatt | atgttgaaaa | attttaaaaa | gggattttaag | ggagattatg | 2340 |
| tattaggaa | aatttaga | | | | | 2358 |

<210> 259

<211> 2358

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 259

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| tttttagtag | ggtgggttta | tttgtgtttg | atttatgttt | ttttgaggta | aaatatttacg | 120 |
| tttatattat | atgtatatta | taaaataaag | aatcggtaaa | aagggtatat | atatattttt | 180 |
| atagtttata | ttaaataaaa | attaaaatta | aaattagagt | atttagaaat | tttaagttaag | 240 |
| ttaaagataa | aattaaagta | tttaagtaatt | taagttaaat | taaaaataga | aattaaagt | 300 |
| tcggtatagg | tatatattcg | gtgattaggt | tatgttttta | tttaaatgga | gtaggtaagt | 360 |
| ttttaagatt | agttttgtta | agtaatttaa | attaagttta | aattaaaatt | aaaattaaag | 420 |
| gttaataaaa | ggtatatcgt | gggtgagtaa | gttacgtttt | tatttaaatg | gagtgggtaa | 480 |
| tttttaaaga | ttagttttat | taagtttttag | atgttttagat | tttaagttat | agtttttttt | 540 |
| tagtgtttag | ttattgtgtt | gattttttac | gggggtttgt | tatatattgt | tttggttaagg | 600 |
| cgtttttatcg | gggtaaatgt | ttattttgga | gtgttttttag | gattttacgtt | gttcgggttg | 660 |
| gttagagttt | tttatcggaa | tgtttttatag | ggtagggtta | agttatttta | ggagttgttt | 720 |
| cgattattta | ttaattattt | tatttttttag | ttagggaatt | aggaaatgt | gtaggataag | 780 |
| ttgtagataa | aattttttcgg | atatcgaatt | aaagaaagaa | gagggtttatt | cgggttagaag | 840 |
| tatcggtaag | atttttgttt | taagagttga | gttttttgag | tgagtaattt | ttattttttt | 900 |
| taagggttta | tagttttaag | gggttttcg | tgaaagggtt | gtgattgatt | gagtaagtag | 960 |
| taggtatata | attgggggtt | gtatgtattg | gtaattagat | tagaatagaa | taggatagga | 1020 |
| attttttatag | tggtttttta | tataatgttt | ggaattttata | gataatataa | tcggttaggt | 1080 |
| taggggtcga | tttttaatta | ttagatttag | ggtgtgggtat | tagattgttt | gttagtggat | 1140 |
| tttattttttg | tttttttagtt | tttattttatt | tttttttttag | aggtagaaat | tggttataag | 1200 |
| ataatatgag | gggtggtatt | tttttttaaa | tggttttttaa | taaatgtaag | ttagttgtgg | 1260 |
| gtgtatggat | tggtttttat | tagtagggag | tagtttaggt | tgatgtagta | gaaaggtggt | 1320 |
| agagtttttag | gtttgagtta | ggtaagatag | atgaggaaaa | ggtagatagt | gaattgttaa | 1380 |
| gatggaatgt | tcgtgtttta | ttcgagaaat | gtttaagttt | gtataattag | gagagataga | 1440 |
| ggatgttttg | agatgttttt | ttgtattttt | gttatgttta | tagttaattt | tttataattt | 1500 |
| agttagtaag | attaaatgta | agtttaagtt | aatttaagtt | atttttttgt | ttaagatttt | 1560 |
| ttaatgtttt | ttagtagttg | aataaagttt | atataatatt | ttaaatataa | tttggaaagt | 1620 |
| aaatattaaa | tatatatttta | atttattgtt | attgtttata | aggttttaaa | tgattttatt | 1680 |
| tggttaagttt | tttaattttt | ttttttattt | tggtttttatt | tatgtttatt | tatattagtt | 1740 |
| tttttgtaga | ttttgaaata | tgttatgttg | aatttttttt | tagggatttt | tttttggtga | 1800 |

<400> 260

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|-------------|-------------|-------------|-------------|-------------|-------------|------|
| tgattataa | agtttaaagg | agaaatttaa | attttatata | gatgttttat | gaagatgttt | 60 |
| agtaaattta | tttttttttg | ttttttggaa | tttatttttag | tattgtgtta | tggtgtgttt | 120 |
| tagtaatttt | ttataaaaag | ttttgttttt | tgtgatgtta | ttagattata | ttgaagaata | 180 |
| tataagtcgt | attatgaagg | ttgttggttt | atatagtttt | aacgtagtga | gaattgatgt | 240 |
| ttttatatgt | tggttttttg | ggattttaaa | gaaatttttg | tatagtttta | taaattagtt | 300 |
| gtagtttaaa | ttgattttgtg | ttgtgatttg | tatatatagg | ttatattttt | ttgatagaaa | 360 |
| atatagttta | aaattaaabt | tgtagttttt | gttaagtga | tgtataggat | tttattgtat | 420 |
| ttaggttttt | tattgtaaga | tttatttttg | tttttatttt | atgtttttat | gttgtgtttt | 480 |
| ttattttgtt | tttttttagtt | ttgttttttg | tgttttttacg | gattgttttt | agtttaggtg | 540 |
| tgtaggaagt | atatatatgt | ttgttagagtt | tttatggttt | ttgtattttag | ggatatgattt | 600 |
| taacgtatag | tggttgtatt | gatttgttaa | aataaaggaa | tagattatttt | tttttaattt | 660 |
| atagggaagt | tttaggttgt | gcgggtagtg | agtagattttg | tgtttgtttg | cgttttgttt | 720 |
| ggtgaaaaat | tttatcgttt | aggttgtagg | gtgcgagatt | taggtataaa | tattttgttg | 780 |
| gatgaggagg | aaagatgtaa | ggttggtttt | tttttagagat | agtaaagggt | aggttttag | 840 |
| ttttattttat | tttaggattg | tgatttttga | tagagtcgag | agattagggt | tgttgaatta | 900 |
| ggtttgaagg | ttttagttaa | tttcgtgaag | agaggagggg | tttggttga | atatggattt | 960 |
| agaggatatt | tttattgtag | gagaagggaat | agtggggatg | gggtggattt | gttaaaggaa | 1020 |
| tatagtttaa | gtttttgtag | tttaaaaaag | tttagttttt | tttggttaa | gttttcgca | 1080 |
| gttttttttg | tatttttttt | gcgggagtta | tagggtagt | gggatattta | gtttttttta | 1140 |
| agtatatttt | acggttggtt | gtgttaagtt | tttattttaa | gagttttatt | tttgogaagt | 1200 |
| atgtgtttt | atatattggt | tttaaagtat | ttatggttg | ttgtaataaa | tattaaggag | 1260 |
| gtttgttttt | gtattcggag | ttgggtgttt | ttattttaga | tgatttcgag | gggttttgat | 1320 |
| aagatttgaa | ggattttcgg | atttttagagt | attatttcgg | acgttttgta | tttttgcgc | 1380 |
| gcgggtacgg | cgattttttt | agttgttagg | ttagtttttg | attttcgaga | gggtttcgta | 1440 |
| tggttgttag | ggagggtggg | attcgaataa | aggagtagtt | ttttcgtcgg | tgttattatt | 1500 |
| cgacgttggt | tttaagggtc | ggttagtttg | tttaaagttg | gtataagttt | gttttgtaaa | 1560 |
| ataaaagaag | ggaaaggggg | aaggggattt | tggtatagat | ttggttcgat | ttggatatag | 1620 |
| gttgggtttg | taagttcgcg | gggatacggg | ttagaggggg | agtgttgga | acgttttttt | 1680 |
| cggaatttaa | tttttttaggg | tattcgtttt | ttttttatgc | gtcgttttat | tttcgtcgga | 1740 |
| gattaggttt | cgcgggggtt | atcgttggtt | atcgttttcg | gcggtcgttg | gtttttgggtt | 1800 |
| ttcgttggtg | gttttttttt | ttttttttcg | tatttttttt | tttttttggt | tttttcgatt | 1860 |
| tttttttcgt | cgtttggttt | tttttttttt | cgttttgttt | tttcgcgttt | cggttcgcgc | 1920 |
| gagttagacg | ttcgggtagt | tttcggcgta | g'gcggtcgt | agtagttttc | gtttttcgta | 1980 |
| cggtgtgagc | gttcgacgcg | gtcgaaggcg | toggagtttc | gagttagttt | cggcggtcgt | 2040 |
| cgtcgtttag | atcggacgat | aggttatttc | gtcggcggtc | gttcgagttt | tcgtttcgtc | 2100 |
| gttaacgtta | taattatcgc | gtacggtttt | ttgatttcgt | ttagttattga | tcgggagagt | 2160 |
| cggagcgagt | ttttcgggga | gtagcgatgc | gatttttcgg | gacggtcggg | gtagcgtttt | 2220 |
| tggcgttggt | ggttgcgttt | tgttcggcga | gtcgggtttt | ggaggaaaa | aaaggtaagg | 2280 |
| gcgtgtttcg | tcggtttttc | cgtcgttttc | ggatcgcgtt | tcggattttc | tagttcgttt | 2340 |
| aatcgcgtat | cggcgtatcg | gttcggcggt | cgcgttttcg | ttcgtttttt | ttgttttttt | 2400 |
| tgagattagt | tgcgtcgtcg | atcgggatcg | cgggaggaac | gggacgtttc | gtttttcgggt | 2460 |
| cgggagagtt | tggggcgggc | ggaggaggag | acgcgtggga | t | | 2501 |

<210> 261
<211> 2501
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically treated genomic DNA (Homo sapiens)

<400> 261

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| cgtttttttt | gcggtttcgg | tcggcggcgt | agttgatttt | aaggaaatag | gaaaggacgg | 120 |
| gcgggggcgc | gggcgtcgag | tcggtgcgtc | gggtgcgcgt | tgggcgggtt | gcgggggttcg | 180 |
| gggcgcgatt | cgggggcggc | gcgggagtcg | gcgagatacg | tttttatttt | tttttttttt | 240 |
| tagagtccga | ttcgtcgggt | agagcgtagt | tagtagcgtt | aggagcgttg | tttcggtcgt | 300 |
| ttcggagggt | cgtatcgttg | tttttcgaag | agttcgtttc | ggtttttttcg | attaatattg | 360 |
| gacggagtta | gggggtcgtg | cgcggtgggt | gtggcgttgg | cggcgaggcg | gggattcggg | 420 |
| cggacgtcga | cgaggtgggt | tgtcgttcgg | tttgggcggc | ggcggtcgtc | gggggttagtt | 480 |
| cgggatttcg | gtcgtttcgg | tcgcgtcggg | cgtttatata | gtgcgggggg | cggaggttgt | 540 |
| gcggtcgcg | ttgcgtcggg | ggttgttcgg | acgttttagt | cgcgcgggtc | gaggcgcggg | 600 |
| aggtagggc | gggaggagga | gggattagcg | ggcgaggag | ggatcgggag | gagtagagga | 660 |
| ggaggagaat | gcgaggagga | gggaggagaa | ttagtagcgg | ggatttaagg | ttagcggtcg | 720 |
| tcggaggcgg | tggatagcgg | tggttttcgc | gggatttagt | tttcggcggg | agtggggcgg | 780 |
| cgtatgggag | gggagcgggt | gttttgagga | gttaattttc | gagaggggcg | tttttagtat | 840 |
| tggttttttg | gattcgggtt | tcgcggattt | gtaggtttag | tttatgttta | ggtcagatta | 900 |
| aaattgtggt | agggtttttt | tttttttttt | tttttttttg | ttttataaag | taaatttgtt | 960 |
| ttagttttag | atagattggt | cgagttttag | agtttagcgt | ggataatggt | atcgacgggg | 1020 |
| aaattgtttt | tttattcggg | tttttatttt | ttttgtagta | ttacgggatt | ttttcgggga | 1080 |
| ttagagggtg | gttttggtagt | tgaggaggtc | gtcgtgttcg | cgcggtaggg | gtgttaggcg | 1140 |
| ttcagagggt | tggttttaag | ttcgagggtt | ttttagattt | tggttaagtat | tttcgaaatt | 1200 |
| atttgaaatg | agggttattt | atttcgggtg | tagagatagg | tttttttaag | gtttattgta | 1260 |
| attagttatg | ggtattttga | agttaatgtg | tgaagtatat | tatttcgtaa | aagtgaagtt | 1320 |
| tttggaataa | aggtttgata | taaatagtcg | tggagggtgt | tttagagagg | tttaagtgtt | 1380 |
| tattgttttt | gtagttttcg | taggagaaat | gttagggaaa | ttcgcggaag | ttttggttaa | 1440 |
| aagaaattga | gttttttttg | gttgtaggaa | tttgagttat | atttttttgg | taagtttatt | 1500 |
| ttatttttat | tggttttttt | ttttagtaaa | aaatgttttt | taggttttat | ttatagttag | 1560 |
| attttttttt | tttttacgag | atttattagg | atttttaggt | ttggtttaat | aattttgatt | 1620 |
| tttcgggtttt | gttaaaaatt | ataattttga | agtaagtga | gttatagatt | tggtttttgt | 1680 |
| tggttttgaa | ggggagtaat | tttatatttt | ttttttttat | ttagtataat | gtttgtgttt | 1740 |
| gggtttcgta | ttttgtagtt | tgaacgggtg | ggttttttat | tagggtaagc | gtagatagat | 1800 |
| taggtttgtt | ttattgttcg | tataatttgg | aatttttttg | tgaattagga | gaagtaattt | 1860 |
| gtttttttgt | tttaataaat | tagtatagtt | attgtgcgtt | gaagttatgt | tttgaatgta | 1920 |
| gaggttatga | aggttttgta | ggtatgtgtg | tggtttttgt | atatttggtt | tgagagtagt | 1980 |
| tcgtagaatg | atagaaaata | aaattagaga | aaggtaaatg | ggaagtataa | tagtggaata | 2040 |
| taaaatgaag | ataggagtga | gttttataat | aaaagatttg | aatataataa | agttttgtgt | 2100 |
| atttatttaa | taagggttgt | aaatttggtt | ttaaattata | ttttttgtta | aggggaatgtg | 2160 |
| atttgtgtgt | ataagttata | atataaatta | atttaagtta | taattgattt | gtaagattgt | 2220 |
| ataggaattt | ttttgagtgt | ttaaaaagat | agtatgtaag | aatattagtt | tttattacgt | 2280 |
| taggattata | tgagataata | gtttttatag | tacggtttgt | atatttttta | atgtgatttg | 2340 |
| atagtattat | aagaaataga | gttttttgta | aagaattatt | agatatatat | atagtataat | 2400 |
| attgggatgg | attttaggga | atagagaaga | atgggtttgt | tgaatatattt | tatgggatat | 2460 |
| ttatgtaaag | tttgagtttt | ttttttgagt | ttttgatata | a | | 2501 |

<210> 262
<211> 3647
<212> DNA
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<220>
<223> chemically treated genomic DNA (Homo sapiens)

<400> 262

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| tttaagggtt | aagggttttt | ttttgtaaaa | tggggaatga | taatatattgt | tttttttgga | 120 |
| gttttgggga | tttagtggtt | tgaggaaegt | gggtgtaggt | tagagtggta | tagagtaggg | 180 |
| tttaatgaag | tatggcggtt | atagtagttt | ttttgattgg | attaattttt | tcggatataa | 240 |
| tagtagggta | ggggtggggt | ttggggagaa | aggatatttt | taattttgat | tttaatat | 300 |
| cgatggtttt | taagggtgtt | tgtatattta | tttaggtgta | agttttttta | ggtgtggtgt | 360 |
| gatgaattag | tgatttttgg | agttagggtt | gcgtattttt | ttttcgtagg | gttgtaagtt | 420 |
| gtaggattga | gaggtaggtt | gattagggtt | tgggttggat | gatggggtga | gagtaagggg | 480 |
| ttagttttga | tatatgttta | attttttttt | ttagttttta | gataatttgg | gtaaattggt | 540 |
| tatttttagtt | tttttgattt | ttattttta | tttaatatata | gtttaagaga | aaatagggat | 600 |
| attgatgggt | atttagaagg | gttggtgtgt | tttatatata | gtaatatatt | tcgaatgttt | 660 |
| gtgatagcgg | tttaaggaat | aagtttaatt | tatatatta | ttttggatat | ttgtataaaa | 720 |
| ttttatttta | tttttattat | atgaatgtgt | taggggtgtt | tttttgtttt | gttttttttt | 780 |
| tttttttttg | agatagagtt | tcgtttttgt | tggttaggtt | ggagtataat | ggcgcgattt | 840 |
| tgggttatcg | taattttcgt | tttttaggtt | taagcgattt | atttggttta | gttttttcga | 900 |
| gtagttggga | ttataggatg | cgttattatg | ttcggtta | tttggtttt | tagtagagat | 960 |
| agggtttttt | tatgttgggt | aggttgggtt | taaattttcg | atttttaggtg | atttatttgt | 1020 |
| tttggttttt | taaagtgttg | taattatagg | taagagttat | cgtatttagt | cgtgttaggg | 1080 |
| tttttttttg | tttaattttt | tttttttttt | ttagtttttt | tttggtgtt | ttaatggagt | 1140 |
| ttatttttgt | tatttaggtt | ggagtgtagt | ggtaagattt | agtttattgt | aatttttgtt | 1200 |
| tttgagttt | aagtaatttt | tttggttttag | tttttcgagt | agttgggatt | ataggtgttt | 1260 |
| gttatttat | ttagttaatt | tttgattttt | tagtagagat | ggggttttgt | tatgttggtt | 1320 |
| agggttgggt | cgaatttttg | atttcgtgat | ttggttgggt | tgggttttta | aagtgttggg | 1380 |
| attataggta | tgagtcgtta | tattcgggtt | atttttgtat | tattttttta | aagagagttt | 1440 |
| tttaaattat | ataagtttta | ggttttataa | aatttagatt | tgtttttagta | taattaaatt | 1500 |
| tgggattatt | tattgagtaa | ttattatgtg | tttaagtatt | cgttgagtgt | tttagagta | 1560 |
| ttattttttt | taatttttagt | atagtatgtt | agatgttggt | ttatagatga | gttaattgag | 1620 |
| attagagatg | tttagttatt | tgtttaaggt | gatatgattg | atatggaata | gagttaagat | 1680 |
| tttttttttt | ttttttgata | cggagtttta | ttttgttttt | taggttggag | tgtagaggcg | 1740 |
| taatttttagt | ttattgttaag | ttttgttttt | taggtttacg | tatttttttg | tttttagttt | 1800 |
| ttgagtagtt | gggattatag | gtattcgtta | ttatatttgg | tttaattttt | gtatttttag | 1860 |
| tagagatagg | gttttatcgt | gttagttagg | atggtttcga | ttttttgatt | tcgtgatttg | 1920 |
| tttggttcgg | ttttttaaag | tgatggaatt | ataggtgtga | gttatcgoga | ttgggttagat | 1980 |
| tttaagatttg | aatttaggtt | tttttggttt | tagaggtttt | tgttttttta | tttttttagta | 2040 |
| tgtatacgta | tttggttttt | tagaggtgtt | tgtttaagtg | tgtttagtat | atggaagtaa | 2100 |
| gttagaaatg | ttaggtatat | ttgtaaagag | gtgtgggaga | tgggggggag | ggaagagaga | 2160 |
| aagagatggt | ggtgtttttt | atttttttagt | tttgatagg | tggttttgat | ttttttttga | 2220 |
| ttagtatagt | tgtatttttg | gttggggtat | tttaattaga | attgttaaat | ttagtatata | 2280 |
| aaaataagga | ggttttagtta | aatttgaatt | ttagataaat | aatgaataat | ttgttagtat | 2340 |
| aatatgttt | tatgtaatat | tttggtgaaa | ttaaaaaaa | aaaaaaaagt | ttttttttta | 2400 |
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| ttgggtgttg | ggtgtttttt | taaataagta | agaagggtgt | attttgaaga | attgagatag | 2580 |
| aagttttttt | gggttgggtg | tagttgttcg | tgggtgtaat | tttagtattt | tgggaggttg | 2640 |
| aggcgggagg | attattttgag | tttgggaggt | taagattagt | tttattaacg | tggagaaatt | 2700 |
| ttgtttttat | taaaaaatata | aaaaatttag | ttgggttatg | tggtatatgt | ttgtaatttt | 2760 |
| agttgttcgg | gaggttgagg | taggagaatt | atttgaatta | gggaggtaga | ggttgtgggt | 2820 |
| agtagagatc | gcgttattgt | tttttagttt | gggtataaag | agtaaaagt | cgtttaaaaa | 2880 |
| aaaaaaaaag | ttttttcgat | gtgattgttt | ttttttta | ttgtagattt | ttttaagatt | 2940 |
| atgtttttta | gatattttta | agatttttaga | agatatgttt | cgggggtttt | ggaagttata | 3000 |
| aggtaaatat | aatatatttt | tttttttgat | tattaatttt | attagaggat | gtggtgggaa | 3060 |
| aattattatt | tgatattaaa | ataataggtt | tgggatggag | taggatgtaa | gttttttagg | 3120 |
| aagttagata | attgagattt | aaagggtgtt | aagagtggta | gtttagggaa | atttatttctg | 3180 |
| gatttcgggg | gagggggtag | agttattagt | ttttgtattt | agggttttt | caggaaaaag | 3240 |
| tgtgagaacg | gttgtaggta | atttaggcgt | ttcggcggtt | ggagggacga | tttaggtttg | 3300 |
| cgcgaagaga | gggagaaaagt | gaagttagga | gttgcgatt | tttagatttc | gttggaatgt | 3360 |
| agttggaggg | ggcgagttgg | gagcgcggtt | gtttttaatt | atcgagagaag | gaggaggtgg | 3420 |
| aggaggaggg | ttgtttgagg | aagtataaga | atgaagttgt | gaagttgaga | ttttttttta | 3480 |
| ttgggatcgg | agaaattagg | ggagtttttc | gggtagtcgc | gcgttttttt | ttacgggggtt | 3540 |
| ttttatttgcg | tcgcgcggtt | ggtttttatt | tttcgtagta | tttcgcggtt | cgcgtttttt | 3600 |
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<210> 263
 <211> 3647
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 <213> Artificial Sequence

<220>
 <223> chemically treated genomic DNA (Homo sapiens)

<400> 263

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| cgcgggggtgt | tgcgaggggt | gggggtcggg | cgcgcggcgt | agtaaagggt | ttcgtgggaa | 120 |
| ggggcgcgcgcg | gttggttcggg | gggttttttt | ggtttttttcg | gttttaaatg | aggggaattt | 180 |
| tagttttata | attttatttt | tatatatttt | taagtagttt | ttttttttta | tttttttttt | 240 |
| tttcggtgat | tgaggagtaag | cgcgttttta | gttcgttttt | tttaattgta | ttttaacgaa | 300 |
| gtttgggagt | cggtaatttt | tagttttatt | tttttttttt | tttcgcgtag | gtttgggtcg | 360 |
| tttttttttag | cgtcgggacg | tttgggttgt | ttgtagtcgt | ttttataatt | tttttcggag | 420 |
| aatttttaaaa | tgtagagggt | ggtgattttg | tttttttttt | cggagttcgg | gataaatttt | 480 |
| tttaggttgt | tatttttaaat | attttttaag | tttttagttat | tttaattttt | ggggagtttg | 540 |
| tatttttattt | tatttttaagt | ttattgtttt | aatattaaat | aatgggtttt | ttattatatt | 600 |
| tttagtaaaa | attgatagtt | aaggaggggg | atgtgttgtg | tttattttgt | ggttttttagg | 660 |
| tttttcgggg | tatatatttt | ggaatttttg | aagtatttga | aaagtatgat | tttaagaggg | 720 |
| tttataaaatt | tgaggaggaga | tagttatatc | gaaaggattt | tttttttttt | ttaaacgaat | 780 |
| ttttgttttt | gttggttagg | ttggagagta | atggcgcgat | ttttgtttat | tataattttt | 840 |
| gtttttttfgg | tttaagtgat | ttttttgttt | tagtttttcg | agtagttggg | attataggta | 900 |
| tgtgttatta | tgattagttg | aattttttgt | attttttagta | aagatagggt | ttttttacgt | 960 |
| tggtgaggtt | ggttttgaat | ttttaagttt | aggtgatttt | ttcgtttttag | ttttttaaag | 1020 |
| tgttggaaatt | ataattacga | gtaattgtat | ttagtttaaa | aagattttta | ttttaatttt | 1080 |
| ttaaaatgta | ttttttttgt | ttatttaagg | aggtattttag | tatttaaatgt | atttaagggt | 1140 |
| tttttttttgt | tttttgtttt | ttattagttt | gtttaatttt | attttttaat | tatattttat | 1200 |
| ttggagtttt | tgattttatt | tttttaggtt | agtggtaggg | gtggggatgg | aaggaagatt | 1260 |
| ttttttttttt | tttttaattt | taataagata | ttgtatggga | tatatattata | ttaataaaatt | 1320 |
| atftattgtt | tatttgaaat | ttaaatttaa | ttgggttttt | ttatttttat | gtgttaaatt | 1380 |
| tggtagtttt | agttggaatg | ttttagttaa | gaatgtagtt | atattgggtta | agaagggtt | 1440 |
| aaagggtattt | attagggatt | ggagaatgaa | ggatattagt | atfttttttt | tttttttttt | 1500 |
| ttttttatttt | tttatatttt | tttataggta | tatttagtat | ttttaatttg | tttttatgtg | 1560 |
| ttgagtatat | ttaaagtagt | atfttttagag | ggataggtgc | gtatgtatgt | tagggagttg | 1620 |
| agaaaatagg | gtttttggga | ttaaagagat | ttgggtttta | atftttgaatt | tggttagtcg | 1680 |
| cgggtggttta | tatttgtaatt | tttattattt | tgaggaggtcg | aggtaggtag | attaacgaggt | 1740 |
| taggagatcg | agattatttt | ggttaataacg | gtgaaatttt | gtttttgtta | aaaaatataaa | 1800 |
| aataggttta | ggtgtggtgg | cgggtgtttg | tagtttttagt | tatttaggag | gttgaggtag | 1860 |
| agaatgcgt | gaatttgga | ggtagagttt | gtagttagtt | gagattgcgt | ttttgtattt | 1920 |
| tagtttgga | gatagagtga | gatttcgtgt | taaaaaaaaa | aaaaaaaaatt | ttgattttat | 1980 |
| tttatattag | ttatgttatt | ttgggtaagt | gattgagtat | ttttggtttt | agttggttta | 2040 |
| tttgtaaaat | agtatttgat | atatttatgtt | ggggttaaag | gagataatgt | tttggaagta | 2100 |
| tttagcgtaa | tatttggtat | ataataattg | tttaataaat | ggtttttagat | ttagttatat | 2160 |
| tggggtagat | ttagggtttg | tggggtttga | agtttatata | atftgggaaa | ttttttttta | 2220 |
| gaaagtaata | taaaagttag | tcgagtatgg | cggtttatgt | ttgtaatttt | agtatttttg | 2280 |
| gaggttaaga | taggtagatt | acgagggttag | gagttcgaga | ttagtttggt | taatatgata | 2340 |
| aaattttatt | tttattaaaa | gtataaaaaat | taattagggtg | tggtggtagg | tatttgtaat | 2400 |
| tttagttatt | cgggaggttg | aggtaggaga | attggttgaa | tttagagggt | agaggttgta | 2460 |
| gtgagttgag | ttttgttatt | gtatttttagt | ttgggtgata | gagtaagatt | ttattgaaat | 2520 |
| aaataaagag | aggttaaaaga | gagagaaggg | aattgaatag | aaaaagattt | tagtacgggt | 2580 |
| gggtgcgggtg | gttttatgttt | gtaattgtag | tattttggga | gggttaaggta | ggtggattat | 2640 |
| ttgaggtcgg | gagtttggtta | ttagtttgat | taatatggag | aaattttggt | tttattaaaa | 2700 |
| atataaaaatt | agtcgggtat | ggtggcgtat | tttgtaattt | tagttatttcg | ggaaggttga | 2760 |
| ggtaggtgaa | tcgtttggaat | ttgggaagcg | gaggttgccg | tgagtttaaga | tcgcgttatt | 2820 |
| gtatttttagt | ttgggtaata | agagcgaaat | tttggttttaa | aaaaaaaaaaa | aaaaaataaa | 2880 |
| ataaaaaaat | aattttagta | tatttatata | gtaaggataa | ggtggagttt | tgtataggta | 2940 |
| tttagagtga | taatgtaaaa | tttaatttat | ttttggatcg | ttgttataaa | tattcgagaa | 3000 |
| atattgttgt | gtatggaata | tagtagtttt | tttggaatgg | tattaatatt | tttatttttt | 3060 |
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| ggatgtttta | gggttagaga | gaaaagtggg | gtatgtatta | aaattgattt | tttattttta | 3180 |

| | | | | | | |
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| ttttattatt | tagtttagga | tttggttaat | ttgtttttta | gttttgtagt | ttatagtttt | 3240 |
| gcgggaagag | gatgcgttga | tttggtttta | ggagttattg | gtttattata | ttatattttg | 3300 |
| gagggtttgt | atttggatga | gtgtgtaggt | agtttttagag | gttatcgga | tgtaggatt | 3360 |
| agggtagag | gtgttttttt | tttttaggtt | ttatttttgt | ttgtgtgtg | tggtcggaaa | 3420 |
| ggttagttta | gttaggaaag | ttattgtgga | cggtatgttt | tattggattt | tattttgtgt | 3480 |
| tattttgatt | tatagttacg | tttttagaa | tattgagttt | ttaagatttt | agaggaggt | 3540 |
| ggtgttatta | ttttttattt | tgtagaagag | gaattttgag | ttttgagatt | ttacgagtt | 3600 |
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<211> 3050

<212> DNA

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<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 264

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| tattaatata | aatataatgat | atataatgat | gaaattttgt | ttttattttt | gtttgtgata | 120 |
| gggaatgtaa | aaatagtaag | tggttttagtt | ttacgaattt | tcgttttttg | tttttttcgt | 180 |
| ttttgtcggg | ttggattttt | aagaatggag | gttagcgtat | agtttcgcgc | gggtcgttta | 240 |
| gttttcggat | tcggcggatg | atgttaggcg | acgggagcgg | tcgcggtcgg | gtcggggagg | 300 |
| tcgcggttta | ggggagttgg | gagggagggg | ggtttcgtta | ggtcgacggc | gcgttcggtc | 360 |
| gcgcggtcgt | gtttggagac | ggttttggcg | gcgttggtgt | gttgtaaata | gtcgtttttt | 420 |
| tgttattatt | tatagtagga | ttttttggtt | ttcgggcgcg | gcggttgagg | gtaggtttgc | 480 |
| ggttcggttt | ttcgcgcggt | tcgaattatt | cgttcgtcgc | ttttattttg | tttcgttttt | 540 |
| tttttaggtgt | ttatcgcggg | tttcgatitt | cgggttcgaa | gagtgagaga | gggaagatcg | 600 |
| gggttggtgog | gggatatgcg | ttttcgcggt | ttggaggtgg | ttagcgcggt | gggttgagtt | 660 |
| ttcggtagcg | tgatttcggt | tggtttacgt | agtagggtag | gagattgggg | ggcgtggtat | 720 |
| attttgaggt | attttggttt | tttaaagttt | cgtgttttag | gacgtggagt | cgtttttggg | 780 |
| gttttagtag | tcgaggtatt | tcgttttaggc | gtagttggat | attgtttttt | tagttttcgt | 840 |
| tttttatttt | ttaaagttcgc | gttggaataa | tattcgttgc | gggttttcgt | aagtatagtt | 900 |
| ttttggcggg | atcgaattag | tttttagcgt | agatttgagt | ttttcgtagg | aagtataatt | 960 |
| cgttttgtta | tttcaattg | attattttgt | ttatataatt | atatttcgta | ttttttattt | 1020 |
| ttgggggtta | gtttagaatc | gggtagatat | tttttttaaa | tgttttcgt | cgtaggtttt | 1080 |
| gtatagtgtt | tattttgttg | tggttttaggg | atttgatagt | ttttttaata | tttttatata | 1140 |
| tggtcgagaa | aaataaataa | ataaatgcgt | tggttttttt | aaaaaaataa | ataaataaag | 1200 |
| tatttagtat | cgtaaagtag | gttatcgtat | ttttttattt | tggttttttt | attttttggt | 1260 |
| tttaaacgta | ggaatagttg | tagtattgtt | cgagttcag | gggtggaggt | taggggagta | 1320 |
| gggtttgttt | ttacgttttg | tattgaatta | gggttagaat | tggggatggg | ggtagggcgc | 1380 |
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| tatttttcggt | gttggtttga | gttcgcgagt | agtttttcgt | aatttttttt | tttttatata | 1680 |
| ggatgtttat | attaggatat | ttgcgttagt | aggtttttac | ggtttttttt | tgtagttttg | 1740 |
| gggggagtta | ttttcgaaat | ttttttattt | ggggggttta | cgagattttt | gagataggaa | 1800 |
| ttgcgaaatg | tttacgagat | taggatacgc | gttaaggcgg | gggtaggagg | ttgcgagcgt | 1860 |
| tggggacgta | gtcgggcggt | cgtagaagcg | tttaggttcg | cgcgttattt | ttttggcgtt | 1920 |
| atcgtggttg | agttcgtgac | gttttatatt | atttataaaa | cgtttggtat | aaaagtagtg | 1980 |
| gttcggtcgt | ttcgtatttt | aatcgtattt | gtagcgagta | tttgagaagt | taagattgag | 2040 |
| tcgggcgtcg | cgcgtagcgc | aacgagtagt | gatcgtgttt | ttatttagtt | ttgtttttata | 2100 |
| gcgtttattt | gttttcggtt | ttcggttttt | cgttcgggtt | tgtttaaatcg | ttacgatgat | 2160 |
| gttttcgggt | tttaacgtag | attacgaggc | gttttttttt | cgttgtagta | gcgcgttttc | 2220 |
| ggtcggggat | agtttttttt | attattattt | attcgtagat | ttttttttta | gtatgggttc | 2280 |
| gtttgttaac | gcgtaggtaa | ggttgggttt | tcgtcgtcgc | ggggtcgggg | gtttggggtc | 2340 |
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| tggaggagg | ttgtcgtggt | cggagcgggt | tcgggttcggg | gggtcgggat | ttgttttgag | 2460 |
| cgtacgtacg | tttggtatag | taagaattgg | tttttttttc | gggaggtagg | ttcgttttga | 2520 |
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| aagtataaat | tcgttaatta | gagtttggtt | ttttcgggga | ggtaggtaga | agcggtaatt | 2640 |

| | | | | | | |
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| tttttttttt | cggtagtttg | gagtagcgag | gagggatgag | ggaggagggg | gtagcggggc | 2700 |
| ggtgtgtaag | gtagttttat | tgataaaaag | cgagtttatt | ttggagattt | cggagcggcg | 2760 |
| tttgcgtag | cgtagacgtt | agggatattt | ataataaatt | tttttttaag | taagtgatgt | 2820 |
| tgaagggata | acgggaacgt | agcggtagga | tggaaagagat | aggtattgcg | ttgcggaatg | 2880 |
| tttgggagga | aaagggggag | attttttatt | taggatgagg | gatatttaag | atgaaatggt | 2940 |
| cgtggtagga | tcgttttttt | ttattgttgt | atgcggtatt | gggaattcgt | tttatttgtg | 3000 |
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<210> 265

<211> 3050

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 265

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| gcgagttttt | agtgtcgtat | gtagtagtga | agagaaaaga | ttttgttacg | gatattttat | 120 |
| tttaaagtgt | ttttattttg | gatgaaaggt | tttttttttt | tttttttagg | tatttcgtag | 180 |
| gtagtggttt | gtttttttta | ttttgtcgtt | gcgttttcgt | tattttttta | gtattatttg | 240 |
| tttgaaaggg | ggtttggtat | aaatatattt | gacgtttgog | ttgacgtagg | cgtcgtttcg | 300 |
| gagtttttag | aatgaattcg | ttttttatta | atgaaattgt | tttatatatt | cgttcgttgt | 360 |
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| ttttgttatt | ttttcggaga | agttaggttt | tagttagcga | gtttgtgttt | gggatacgtt | 480 |
| tgtttttagt | aatgttagag | attcgttttg | gagtgtagat | tagaggttgt | ttagaacgaa | 540 |
| tttggttttc | gaagggggaa | ttaattttta | ttatggtaag | cgtgcgtgog | tttagagtaa | 600 |
| gtttcagagt | ttcagagtcg | tatcgtttcg | gttacggtag | ttttttttta | ggtataaggg | 660 |
| agttttttat | ttattttatt | gagcgtttcg | ttcgggtgtt | tttttttcgc | gatttttaagt | 720 |
| tttcggtttc | gcggcgacgg | gaagttagtt | ttatttgogc | gttgataggg | gagtttatgt | 780 |
| tggagaagga | gtttgcgggt | gagtggtagt | aagagaggtt | attttcgggc | ggggacgcgt | 840 |
| tggtgtagcg | ggaggatgac | gtttcgtagt | ttgcgttgaa | gttcgagaat | attatcgtgg | 900 |
| cggttaggta | aagtcggggc | aggggtcgag | gggaggagat | agggtggcgt | tgtagagtag | 960 |
| agttgggtag | gagtagcgtt | attgttcgtt | cgttgogtgc | cggtcgtcgg | tttagttttg | 1020 |
| gtttttttag | tggtcgttgt | agatgcgggt | ggagtacgag | gcgtcgtagt | tattgttttt | 1080 |
| ataataagcg | ttttatgaat | gagtgtaaac | gttacgggtt | taattacggt | ggcgttagag | 1140 |
| gggtggcgcg | cgggttttgg | cgttttttgc | gtcgttcggt | tgcgttttta | gcgttcgtag | 1200 |
| ttttttgttt | tcgtttttgc | gcgtgtttta | atttcgtgag | tatttcgtag | ttttgttttt | 1260 |
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| ggaggattta | aaataagaga | atacgataat | ttatttttac | atattgggta | ttttattttat | 1860 |
| ttattttttt | aaagaagata | gcgtattttat | ttattttatt | ttttcggtta | tgtgtgggaa | 1920 |
| tattaaggaa | attgttaaat | ttttgagata | ttagtagata | aatatttgtt | aaaattttacg | 1980 |
| tgcaagata | tttgaagggg | gtgtttgttc | ggttttgagt | tggttttttag | gggtaggag | 2040 |
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| ttttagtcgt | cgcgttcggg | agttaggaga | ttttgttata | gatagtaata | gggaagcggg | 2640 |
| tgtttatagt | aatatagcgt | cgttaggggc | gttttttaggt | aacgtcgcgc | ggtcggggcg | 2700 |

| | | | | | | |
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| gtcgtcgggt | tggtcgaggtt | atgtttttttt | ttagttttttt | tggttcgctgg | tttttttcggt | 2760 |
| tcggttcgctg | tcgtttttcgt | cggtttgatat | tatttcgctgg | gttcgggggtt | tgagcgggttc | 2820 |
| gcgcgaggtt | gtgcgttaaat | ttttatttttt | agagattttaa | ttcggtagga | gcggggaggg | 2880 |
| taggagggcgg | ggattcgtgg | aattgggtta | tttgttatttt | ttgtatttttt | tggtataggt | 2940 |
| agaggtgaaa | atagaattttt | attattgtat | gttattgggtt | tatgttgggtg | ggaatttagg | 3000 |
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<210> 266

<211> 3397

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 266

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| gtttcggaga | tttattttat | aggtaattaa | atggatcgtt | gggtttttgt | gtgtgtgggt | 780 |
| tttttttggt | tatttttttt | tttttagaaaa | atattttatt | aagaaggttt | ttataattta | 840 |
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| tggtgttag | tttagagaaa | ttattgtttat | aagaaaat | ttttttggtta | gattagtagt | 1200 |
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| gtatagcgtt | tttagaagtg | cggttttttt | ttattttcgg | tagcgatttt | atgttttcgtt | 1860 |
| ttcgttgctg | gcgcgcgtgt | gttcgtttgt | ttgtatgttt | tttcgacgtt | agtgggaatt | 1920 |
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| ttagaattga | ataggagagt | ttattttattt | tttttttatt | tttaaaagaa | atttggttcg | 2940 |
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| tatatatata | tatatatata | tatatatata | cgatatagtt | atttggtata | ggatttgatt | 3060 |
| ttgatttttc | ggggttttgt | atttgagaga | gaaaataaat | tattttattg | gatatttaga | 3120 |
| gtatttttta | gatttgatta | tgtaaaattt | ttggatagtg | ttattatgta | ttatgtatga | 3180 |
| tcgttgaaat | aaaaataatg | taaaaataag | gtttattttta | aatgtaagtt | tttttatggg | 3240 |
| ttttaaaaat | agatattagg | gaatgtttgt | tttgattttgt | tggttttatt | tgaattttaa | 3300 |
| atgggattta | atgatatagg | atttaattat | taagattgat | atgtttatgg | attttgttaa | 3360 |
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<210> 267

<211> 3397

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo. sapiens)

<400> 267

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| gaatgaggaa | gttcgagtgg | ggttgagggg | ggtgcggagg | gttgggcggg | aggatttggg | 960 |
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| taagggttgg | agtcggtagg | gaagttttta | ggaagcgttt | gtcgggttta | attaatggtc | 1800 |
| ggggaacgta | ggtagtagcg | aggcggcggc | ggtggttagt | tcgttgatag | agttatgcgg | 1860 |
| ttatagtttt | tttagggtag | gttcgagtag | ttggagggtc | ggtatggatt | taagtatggt | 1920 |
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| gttttttaaaa | ttttttttta | ttttgttaat | attggtttta | gaaattttta | gtattagata | 5040 |
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<220>

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| ttatatcgtg | tatgtaatgt | ataagtattt | atttcgtttg | tttgggggtt | tgtttgtttt | 60 |
| tgttgagttc | gattttttta | tttgtcgttt | ggttttttgt | ttacgtttta | gtgttattga | 120 |
| gattaaggag | agaacgaatt | tgctcgtgat | tgggtagagc | gagcgcgtgg | atcgcggtta | 180 |
| tcgttcggtt | attattcgcg | cgtattttgg | ttggtatcgg | gcgaagaatc | gtgcgggttt | 240 |
| gggatttggg | ggtttagagg | gagcgaagtt | ttgcgcgggc | gttcggttcg | taggtttcgt | 300 |
| aggttttagg | gcgtgtttcg | tttttatttt | tatttcggat | ttcggttttt | tttttttagat | 360 |
| agcgtttttt | tttatttttg | gttttcgtag | gtcgttagta | gttcgcgtta | ggtttcgtcg | 420 |
| gcgttttttag | ggttttttag | atcgcgtaga | ttttgatatt | ttcgtttggt | tttgggtttt | 480 |
| gggagttag | agtcggttag | ggttttggtc | gtattttcgg | gcgttttagt | tcgggtttgt | 540 |
| tttttcgcgga | cgttttaatt | ttttcggtcg | aatggatggt | ggtgcgcgcg | cgttttattt | 600 |
| cggcggtgtc | ggtttttttt | gttggttaaaa | ttagatttaa | atttttgtat | gggattcgtt | 660 |
| tttggttttt | tatttcgtgc | gttttagtaaa | tagtgggtga | gttatgaaga | tgtgcgagtt | 720 |
| agtcggattt | ttttcgttag | gcgcggattc | gttcggttta | gagaatttag | tttgcgttag | 780 |
| ttcggttcgt | tcgcgaagtt | acgggtttta | ttgacgcgat | tttttaagac | gtgggggtta | 840 |
| ttatgggtag | aggatatcgg | ttcggagtta | gattacgggt | tttataagta | ttagattata | 900 |
| agtagcgtcg | ttattgagag | tcgttcggaa | ttcgttttagt | atgtcgggtt | tttttagttag | 960 |
| ggttttggtg | acgtggtcga | gggttttgga | agtttcgatg | gttttaggag | agtaggcggg | 1020 |
| cggggcggcg | ggtgtcgttg | gtcggtagag | agtttcggtt | tgatttagcg | taggtttggt | 1080 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gcgcgtagag | aataatttta | agcgtatoga | cgttcgcgag | ttttttttaa | atatcgaacg | 1140 |
| ggattttagag | ttcagagttta | taggcggcgg | tcgggggagg | gagtaggggtg | ttggctcgtcg | 1200 |
| ttcgggagtg | ttcgcggtttt | gggtgattttt | tggadggacg | tggggtttaa | atttcgggttg | 1260 |
| gggttgggag | agtagttttt | agaggtttttt | cgcgggattt | tttgcgggc | gggatcgtgg | 1320 |
| ttttatagga | gaagtgggtg | gtaagttttt | tttggcggaa | agtagtcgtt | tttttttttt | 1380 |
| tgggtttggg | gcgcgctttt | ttattttttgt | ttttcgtttt | ttatttttgt | ttttcgtcgg | 1440 |
| ttatatattt | tgttttttgg | attttaagcg | tttcgcgcgt | cgaggagttt | agcgttagtg | 1500 |
| gcggcggtta | ggagagattc | gggtgttagg | aaagatgggt | cgtttggggg | atagtaggga | 1560 |
| gttcggggga | aacgtaggcg | tcgggtatag | agtcgggtatc | ggcgttttta | gttttgtcga | 1620 |
| agatcgcggt | cgggttttgg | tcgcgggagg | ggttttggcg | tcggatttgt | ttcggttttg | 1680 |
| cgtgggcggt | ttcgtcgggt | tttgtaggag | cgacgcgcgt | taaaaggcgg | cggaaggag | 1740 |
| gcggggtaga | gcgcggttcg | gatttcgatt | tggacgcggt | tagttggaga | ggcggagcgt | 1800 |
| cgggaggaga | ttttggtttc | gtcgcgattc | gggtgttcgc | gttgtttttt | cgcgcgtcgg | 1860 |
| gttaaaaagg | cgttaacggt | cgcggtcgtt | tatttttcgc | ggcgtttttt | tttttcgcgt | 1920 |
| ttatataatt | cgttttaggg | tcgggtagtt | cgttttgttt | tttcgttcgc | gtattcgttc | 1980 |
| ggaggttcgc | gcgttcgcga | aggggacgta | gcgaaatcgg | ggttcgcgtt | aggtagtcg | 2040 |
| ggacggacgt | cgatgttcgg | ggttcgcacg | gttgtaggta | ggaggtttag | ggtcgggggg | 2100 |
| cggttcgggt | tcgcgggcgg | gggttgagc | gtagcgttgg | gtaggtattt | gggttcgtag | 2160 |
| tttcgaagtt | gggaggtgag | gggagagcga | tcggggacga | gttgggataa | ggcgatatag | 2220 |
| gggttttttc | ggagttggat | cgttttttgg | gatttggcgt | tcgcgagagg | ttggagcgg | 2280 |
| agagtttag | tttgcgagga | gacgcgggtt | ttgttttttag | cgtcgggtcgt | ttttggcgtt | 2340 |
| aagatagtt | tcgtagggtt | ttcgggagg | tttttttttt | gttgtttttt | ttttatttcg | 2400 |
| ggtttcgagg | gtcgttgagg | gggtaatttc | gggaagaggt | cggggtgcgg | ggcgcgggtg | 2460 |
| taggtggaaa | tcgttagtaa | gttttttttc | gttcgcgcgt | ttttttcgat | ttgtagggtt | 2520 |
| gtgttaattt | cgaggtttta | gttttttttg | ggagttagg | ttaggttttt | ttttggatag | 2580 |
| ggagaaggat | ttgggcgggg | gttttgattt | atggagttgg | ttattaagcg | gtttcgatgg | 2640 |
| tttttcgagg | gatatgtttt | tgtggttttg | agtttgtttg | tcgagggttt | ttgggtttgt | 2700 |
| ttcggagcgg | ttttaggtag | agaaagttcg | tgaagaaatg | gttcgggtcg | gtttggagg | 2760 |
| agatatattt | cgttttttta | gtttttgggt | cgtttttttt | tgtagttttt | gtttttttcg | 2820 |
| gggtttggat | ttggggagcg | atgattattt | ttgtttagtt | tgtatttttg | tttgacggtt | 2880 |
| aggagataag | tttatgtagt | atgtatacgt | ttgttatata | aataggggat | agatagacga | 2940 |
| tttttaatta | gtaagggtgt | agggaaaagt | aatgtatttt | aaatttttga | ttagaggtta | 3000 |
| tttgttttta | aagatgttgt | tatttgttta | tttattgttt | ggatatattg | aaatggttta | 3060 |
| ggtttattaa | tataatg | | | | | 3077 |

<210> 273

<211> 3077

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 273

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| gtattttttg | aagtaaatga | tttttggtta | gaagtttggg | gtgtattgtt | tttttttgta | 120 |
| tttttggttg | ttgaagatcg | tttatttggt | ttttgtttat | gtagtagacg | tgtgtatatt | 180 |
| atatgggttt | atttttttagc | gttttaggtta | aaatataagt | tgagtaaagg | taattatcgt | 240 |
| tttttaagtt | taagtttcgg | gaaaggtagg | ggttgtagg | ggaggcgggt | taggagttaa | 300 |
| gggggcgtga | ggtgtttttt | tttaggtcgg | ttcgggttat | ttttttacgg | gtttttttta | 360 |
| tttgggacgt | tttcggagat | agggttaggag | ttttcgatag | ataaatttag | agttatagg | 420 |
| agttgttttt | cggaataa | tcgaaatcgt | ttagtaatta | attttatggg | tttaaggtttt | 480 |
| cgttttagatt | tttttttttg | tttagagggg | ggtttggttt | tgggtttttta | gggaagttga | 540 |
| ggtttcggga | ttggtatagt | ttttaggttc | ggaggagcgg | cgcgggcggg | gaggagtttg | 600 |
| ttggcgattt | ttatttgtat | tcgcgttttc | tatttcgggt | ttttttcggg | gttatttttt | 660 |
| taacggtttt | cggagttcgg | ggtggagagg | ggataggtag | aggagggttt | tttcggaatt | 720 |
| tttgcggggg | tgtttttggc | gttaaaggcg | gtcggcggtt | agggtaggat | tcgcgttttt | 780 |
| tcgtaggtta | gattttggtc | gttttagttt | ttcgcgagcg | tttaagttta | ggggtcgatt | 840 |
| taatttcgag | ggagtttttg | tgtcgttttg | ttttagttcg | ttttcgatcg | tttttttttt | 900 |
| attttttagt | ttcggagttg | cgagtttagg | tgtttgttta | gcgttgcggt | ttagttttcg | 960 |
| ttcgcggagt | cgaatcgttt | ttcgggtttg | ggttttttat | ttgtagtcgt | cgtagtttcg | 1020 |
| ggtatcggcg | ttcgtttcgg | ttggtttggc | gcgggtttcg | gtttcgttgc | gtttttttcg | 1080 |

542
59

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| cgggcgcgcg | agttttcggg | cggggtgcgcg | ggcggggagg | tagggcgggg | tggttcggttt | 1140 |
| ttaggcgggt | tatatgggcg | cggggagggg | aggcgtcgcg | gggagtaggc | ggtcgcgggc | 1200 |
| gttagcggtt | tttttagttcg | gcgcgcggga | aggtagcgcg | ggttatcgag | tcgcggcggg | 1260 |
| gttaaggttt | tttttcggcg | tttcggtttt | ttagttggtc | gcgtttaagt | cggggtttcg | 1320 |
| ggcgcggttt | gtttcgtttt | tttttcgctg | ttttttggcg | cgcttcggtt | ttgtagagtt | 1380 |
| cggcgaggtc | gtttacgtag | ggtcgaagta | ggttcggcgt | taggggtttt | ttcgcgggtt | 1440 |
| agattcgatc | gcgattttcg | gtagagttgg | ggacgtcggt | gtcgattttg | tggttcgacgt | 1500 |
| ttgcggtttt | ttcggatttt | ttggtgtttt | ttagacgggt | tatttttttt | gatattcggg | 1560 |
| ttttttttgg | tcgctggtat | tagcggttgg | tttttcggcg | cgcggggcgt | ttggaattta | 1620 |
| aggggttaggg | gatgtggtcg | gcggggaata | gggggtgagg | gcggggaata | gggggtgagg | 1680 |
| gcgtcggttt | aggttttagga | ggagggaac | ggttgttttt | cggttaagtag | ggtttggtat | 1740 |
| ttattttttt | tggtggagtta | cggtttcgtt | cggttagagga | tttcgcggag | agtttttggg | 1800 |
| ggttgttttt | tttaattttag | tcggagtttg | ggttttacgt | tttttttagg | gttatttagg | 1860 |
| acgcgaatat | tttcgggcgg | cggttagtat | tttggttttt | ttttcggctg | tcgtttggtg | 1920 |
| gttcgggttt | tggatttcgt | tcggtgtttg | qaaggagttc | gcgggcgctg | gtgcgtttgg | 1980 |
| agttgttttt | tcgcgcgtatt | agatttgctg | taggttaggt | cgaagttttt | tatcggttag | 2040 |
| cgaatttcgt | cgtttcgttc | gtttgttttt | tttaggttat | cggggttttt | agggttttcg | 2100 |
| attacgtata | ttaggttttg | gttaggggat | tcgatatgtt | gggcgagttt | cgagcggttt | 2160 |
| ttagtggcgg | cggttggttat | ggtttgatgt | ttatgggggt | cggtgatttg | tttcgaatcg | 2220 |
| atgttttttg | tttatgggtga | tttttacgtt | ttggaaagtc | gcgttagtga | agttcgtggt | 2280 |
| tcgcgagcg | agtcgggttg | gcgtagattg | ggtttttttg | tcgtagcggg | ttcgcggttg | 2340 |
| cggggaggg | ttcgggtgat | tcgtatatatt | ttatgggtta | tttattgttt | gttgggcgta | 2400 |
| cggggtgggg | atttaaagac | gaattttatg | tagaggtttg | ggtttagttt | tggtaataga | 2460 |
| aaaggtcggt | atcgtcggag | taggacgcgc | gcgtattatt | atttattcgg | tcggggaggt | 2520 |
| tggggcggtc | gcggggagta | gattcgaggt | tgggcggttcg | gaggtacgag | taggattttg | 2580 |
| gtcgggtttt | agtttttaga | atttaggggt | aggcggggat | gttaggggtt | gcgcgatttg | 2640 |
| gggggtttta | gaggcgctcg | cggggttttg | cgcggattat | tagcgggttg | cgggagttag | 2700 |
| gggtggagg | ggtcggttgt | tagggaagag | gatcgggggt | cggagtgggg | gtgagaacga | 2760 |
| ggtacgtttt | tgagtttgcg | aaatttgcg | atcgagcggt | cgcgtaggag | ttcgtttttt | 2820 |
| ttgggttttt | aggttttaga | ttcgtacgat | tttcggttcg | gtggttagtt | agatgcgcgc | 2880 |
| gggtgatgaa | cgggcggttg | tcgcgattta | cgcgttcggt | ttgttttagt | agcggtaaat | 2940 |
| tcgttttttt | tttgatttta | gtggtatttg | agcgtgaggt | aagggttagg | cggtaggtag | 3000 |
| aggggtcgga | tttagtaaaa | gtaaaataaaa | ttttaagtaa | acgaaataaa | tatttatata | 3060 |
| ttatatatac | gatataa | | | | | 3077 |

- <210> 274
- <211> 3814
- <212> DNA
- <213> Artificial Sequence

220>

223> chemically treated genomic DNA (Homo sapiens).

<400> 274:

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| gggaggggtt | gttaagtgtt | ttgtttattg | gttggttttc | gaatttttgt | tattttacgt | 120 |
| ataaatatat | ttatatattt | tttttgttta | gtttatatat | tgagttatc | gtatatgcga | 180 |
| gtatattttt | tttttttttt | ttattttttc | ggtttttgat | ttttataagt | ttatggaata | 240 |
| tttttggaaa | gacgtttttg | atttagtagg | gtaggtttgt | tttgattttt | ttttttgtag | 300 |
| tttttagtatt | ttgagaaagt | aatttatatt | tttggttagt | gtttgtattt | tagtagggag | 360 |
| atgaggattg | ttgtttttta | tgggggtatg | tgtgtgtttt | tttttttttt | taggattttg | 420 |
| aggatttttt | gtgttatttg | tatatattt | ggtaggttta | tattttttta | gagttttatg | 480 |
| aagtgttttt | tgatgtgtt | ttaaaaaggt | atttgaaaat | tgaaagtgtg | atttatggaa | 540 |
| attaaattat | ttgtaaaaaa | ttgttttgga | aagtaatgat | tggttggtat | aaagggaaat | 600 |
| atttgcgatg | tatttaaatg | gttttttaatt | ttttatttgt | tgataattta | tagttattaa | 660 |
| tgttaaattc | gatttttggt | ttagttatat | ttgtatatgt | tttaataatg | gtttattttt | 720 |
| gtaagaatta | gataaaatgt | atatttgata | taaaatagtt | aaaaatgtaa | tttttagtaa | 780 |
| tagtaagttt | ggtattttaga | tagattatga | atatttcggt | agatattttg | ttgggtgttt | 840 |
| gggatagtaa | ttaaaaataaa | gtattgatag | ttgtattaga | gtttattagg | ttgtagtaaa | 900 |
| ggaagtttat | ttaaaagtat | aaattattta | agattataga | cgtatgatat | attttattta | 960 |
| ttttttgttt | ttttaatatg | tatatatata | tatatatata | tatatatata | tatatatgtg | 1020 |
| tgtgtgtatg | tgcggtgtga | tgtttaattt | tttaatttagt | taaaaatttt | tttttatttg | 1080 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ttttttat | ggatatttga | ttttgtatat | tttagtttaa | gtgaatcgag | aagatcgagt | 1140 |
| tgtaggatta | aaggatagat | atgtagaaat | gtatttttaa | aatttggttag | ttggattaga | 1200 |
| tcgataatgt | aataataattg | ttaaagtttt | ggttcgtgat | ttgagggttat | gtttggtatg | 1260 |
| aaaagggttat | attttatatt | tagttttttg | aagttttggg | tgtataatta | atttgtggaa | 1320 |
| ggtatgaata | tttatgtgcg | ttttaattaa | aggttttttt | gaattatttt | ttatatgaga | 1380 |
| atttttaatg | ggattaagta | tagtattgtg | gtttaatata | aatatataag | ttagggttag | 1440 |
| agaatttttag | aaggttgtgg | aagggtttat | ttattttggg | agtattttgt | agaggaagaa | 1500 |
| attgaggttt | tggtagggtt | tatttttttg | atggtaaaat | gtagtttttt | ttatatgtat | 1560 |
| attttgaatt | ttcggttttt | ttttttttaga | tgttttttgt | tagttttttt | agttgttaaa | 1620 |
| tatagttggt | tgtggttggg | tgcgtatgta | atcgatatatt | ttattttatt | tgtttttttt | 1680 |
| cggttatagt | gtagtttttt | ttagggttat | tttatgtata | tattacgtat | ttttagttaa | 1740 |
| cgaggagggg | gaattaaata | gaaagagaga | taaatagaga | tatatcggag | tttgggtacg | 1800 |
| ggtatataag | gtagtataatt | agagaaagtc | ggtttttggg | ttcggttttt | gcgttttttt | 1860 |
| taagtttagt | tttttttggg | ttatttttag | tagattttcg | tgcgttttcg | ttttttggtc | 1920 |
| gtgaaattta | gttttttatt | agtagcgacg | ataagtaaag | taaagtttag | ggaagttggt | 1980 |
| ttttgggatc | gttttaaatc | gagttgtgtt | tggagtgtat | tttaagttaa | tgtaggggtg | 2040 |
| aggtaatagt | ttttggtcgt | tttttagtat | ttttgtaatt | tatatgagtt | cgggagattg | 2100 |
| gtattttaaag | ttggaggttc | gggagtttag | gagttggcgg | agggcggttc | ttttgggatt | 2160 |
| gtatttggtt | tcgtcgggtc | gttcgggttt | atcggattcg | taggttttcg | gggtagggtc | 2220 |
| ggggttagag | ttcgcggtgc | ggcgggatat | gcgttgcgtc | gtttttaatt | tcgggtttgt | 2280 |
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| ttttttggag | cggttttttg | gcgaggtgta | tttggtatag | agtaagttcg | tcgtgtataa | 2520 |
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| cggttagatc | ggtttttttt | acggttttcg | gtttgaggtt | gcggcggttc | gttttaacg | 2640 |
| ttttgggggt | ttttttttat | ttaatagcgt | gttttcogagt | tcgttgatgt | tattgtattc | 2700 |
| gtcgtcgtag | ttgtcgtttt | ttttgtagtt | ttacoggttag | taggtgtttt | attatttgga | 2760 |
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| gcgttcgcgt | cgttcgtcgg | ggtggtcgtc | gcgttcggta | ggagggaggg | agggaggagg | 2880 |
| ggagaaggga | gagtttaggg | agttgcggga | gtcgcgggac | gcgcgattcg | aggggtgcgcg | 2940 |
| tagggagttc | ggggcgcgcg | gttttagttcg | gggggttttc | gtgtagttcg | cggtgcgttt | 3000 |
| agagtttaagt | tttttcgtcg | ggtagttgaa | aaaaacgtat | tttttattta | tttatcgttc | 3060 |
| gtgcgagagg | tagattcgaa | agttcgggtt | ttttaataaa | atatacgttg | gaaaattaga | 3120 |
| taaagtagta | gttatttgtg | ggggaaaata | tttttaggta | aataaatacg | gggcgttttg | 3180 |
| agttatttgg | gaagggttcg | tttttggtat | ttaaagttgg | gggtgttttg | agtttagtaga | 3240 |
| gtttagtaga | gttttattta | tttttttaat | gtttttgttt | aatgtgtttt | ttaaattttt | 3300 |
| ttttatttag | attatttgat | tggaaatatg | ttagttatga | tgatgatttt | ttgggaagcg | 3360 |
| atttttgtta | ttcggttttt | tttttttttt | atttttacgtt | ttggggtttt | agagagcgat | 3420 |
| tgggagttga | atgggtttga | tttcggagtt | agttbggtga | gttcgcgttg | gagcggattg | 3480 |
| tggtatgtg | atttttgata | gtcggaaatt | tgtaggtgtt | tcgcgagttt | aaaataagtt | 3540 |
| tcggaagt | ataagtgttt | aaaaataatt | ttttgttagt | ttagtataaa | gtttgtttta | 3600 |
| tcgggggaga | atgtttcgga | gtggcggtcg | ggttagttag | ggtttgcggt | tcgtagttat | 3660 |
| tgtggaagga | gcgcgggtcg | tttaggatat | aggagattat | tttgtgattt | taatggcgaa | 3720 |
| gggtgtgtgt | ttttatttta | attttttttt | ttataagaat | tgtttttttt | tttttttttt | 3780 |
| ttttttttat | ttttttttgt | ttagtttttt | tttt | | | 3814 |

<210> 275

<211> 3814

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 275

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| gtagggaaaa | aaattaaaat | gaggatatat | aattttcgtt | attgaagtta | taaagtgggt | 120 |
| ttttgtgttt | tggtatcggtc | gcgttttttt | tatagtgggt | gcgaggcgta | gattttgggt | 180 |
| gattcgtacg | ttatttcggg | gtattttttt | cgggtgggat | aggtttgtta | ttgggttggg | 240 |
| aggagattat | ttttaagtat | ttgtgttttt | atatggtttg | ttttaaatc | gcgggatatt | 300 |
| tataaatttt | cgggtgttag | aagttatatg | ttagtaattc | gttttagcgc | ggatttagtt | 360 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| agttaatttc | gaaatttagat | ttattttaatt | tttaaatcggt | ttttaaaagtt | ttaggacgtg | 420 |
| gggtggggag | gaggggaaag | cgggtgatag | gaatcggttt | ttagaaagtt | attattatag | 480 |
| ttgatataatt | tttaattaaa | tagtttagat | gaaaggaaat | ttggggagta | tattaaataa | 540 |
| aaatattaaa | aggataaata | aaattttggt | gagttttggt | aattttaaat | atttttaatt | 600 |
| ttaaatgtta | agagcgagat | ttttttaagt | gatttaaagc | gtttcgtgtt | tatttgtttg | 660 |
| gaggtgtttt | tttttataaa | taattgttgt | tttggttggt | tttttaacgt | gtgttttgtt | 720 |
| aggaagttcg | ggttttcggg | tttggttttc | gtacggacgg | taagtgggtg | gagagtacgt | 780 |
| tttttttagt | tggtcggcga | gagaatttga | ttttgaacgt | agcgcgggtt | gtacgtagaa | 840 |
| ttttcgggtt | gggtcgcgcg | tttcgggttt | tttgccgcgt | ttttcgggtc | gcgcgtttcg | 900 |
| cggttttcgt | agtttttttag | gttttttttt | tttttttttt | tttttttttt | tttttgctcg | 960 |
| gcgcggcggt | tatttcgacg | ggcggcgcg | gcgcgggtat | ttgtagaatg | tcggcgggtc | 1020 |
| ggtttcgcgt | atcgtgtagt | cgttggtgtt | gttttttagg | tagtagggta | tttggttggtc | 1080 |
| gtgggttgtt | aggaaaggcg | atagttgcgg | cggcgggtgt | agtagtatta | gcgggttcgg | 1140 |
| agatacgttg | ttgagtgggg | ggaaattttt | taggtcgttg | gagtcgaacg | tcgtagtttt | 1200 |
| agattcgggg | tcgtagggga | ggtcgggttg | atcgtagatt | tgccgcgttg | cgccggtcgc | 1260 |
| ggcgttgaat | tcgtaggcgg | cgttttcggg | gtagttgtat | acggcgggtt | tggtgttgtt | 1320 |
| taggtatatt | tcgttttaggg | gtcgttttag | ggggattttg | agttgcggac | ggtttagggg | 1380 |
| tttttagttcg | tttttttga | tttgatgtag | tagggttatt | ttagatgttt | tggtgtggag | 1440 |
| ggttatgggt | atgggtcgtg | gtcgcgggtg | gggtgtagat | cgtgttttcg | tagggtagaa | 1500 |
| ggtttagaaa | tcggcgggtt | atttgaaaa | agagtatagt | tcgaggtag | aggcgacgta | 1560 |
| cgtatgttt | cgtcgatacg | caggttttg | tttcgggttt | gtttcggggg | tttgccgggtt | 1620 |
| gggtgaagtc | gggcgattcg | acgggagtaa | gtgtagtttt | aggacgaacg | tttttcgtta | 1680 |
| gtttttgggt | tttcgggttt | tttaatttaa | gtattggttt | ttcaggttta | tatgtattat | 1740 |
| aaagggtgtt | gaggacggtt | agggattgtt | gttttggttt | gatattgggt | ttaaataatt | 1800 |
| tttaggtata | attcgatttg | gagcgatttt | aaagagtagt | ttttttgaat | tttattttat | 1860 |
| ttgtcgtcgt | tggttgatag | agggttgagt | ttacggttag | ggggcggggg | cgtacgaggg | 1920 |
| tttgttaaag | gtggttttag | gaagattggg | tttaaaataa | acgcgaaaga | cggatttagg | 1980 |
| ggtcgggttt | ttttaatgtg | ttggtttatg | tggttcgtgt | tagatttcga | tatatttttg | 2040 |
| tttggttttt | ttttgttttg | attttttttt | ttcggttggt | agaaatacgt | agtgtgtata | 2100 |
| taggatgatt | ttggggagga | ttatattgta | atcgagatag | ggtagataga | atgggggtgt | 2160 |
| cggttgtata | cgtagttagt | tatagatagt | tatttttagt | agttggggga | attgataggg | 2220 |
| ggattttgag | gggaaggggg | cggagattta | gggtatatat | ataggaagag | ttgtattttg | 2280 |
| ttattaggag | aatgtaattt | gttaggattt | tagttttttt | ttttgtaaaa | tggttttaaa | 2340 |
| gtagatagat | ttttttataa | ttttttgaga | tttttttagt | ttgatttggt | tggttatgtt | 2400 |
| ggattatagt | attgtatttg | gttttattag | gaatttttat | gtgaaggatg | atttagaaaa | 2460 |
| atttttgggt | agggcgtata | tgggtgttta | tggtttttat | aggttggtta | tgtaattaaa | 2520 |
| attttagaaa | attgaatata | aaatgtgatt | tttttatatt | aaatataatt | ttaggttacg | 2580 |
| aattaaagtt | ttggtaatta | tggttatatt | tcggtttggt | ttagtttaata | gatttttaaa | 2640 |
| atgtattttt | gtatgtttat | tttttagttt | tataattcga | ttttttcggg | ttatttggtt | 2700 |
| taggatatgt | agaattaaat | atttagatga | aaaataagat | gaaaaaagtt | tttaattgaa | 2760 |
| taaaagttta | aataatgtata | cgtatatata | tatatatata | tatgtgtata | tatatatata | 2820 |
| tatatatata | tatatatatt | aaggagataa | aaaataggtg | aagtataatta | tcggtttata | 2880 |
| atttttggata | gttttatattt | ttgaataaat | tttttttggt | gtagtttaatt | agattttgat | 2940 |
| ataattatta | atatttttgt | tttaattgta | ttttaaatat | ttaatagagt | atgtgacgaa | 3000 |
| gtgtttatgg | tttattttaaa | tgtttaagttt | attgttatta | agagttatat | ttttgattat | 3060 |
| tttatattaa | gtatatattt | tattttaattt | ttataaaaaat | agattattgt | tggataaatat | 3120 |
| gtaaatgtag | ttgaagttaa | aatcgagttt | agtattaatg | attatagatt | gttagtaaat | 3180 |
| aaagggttaa | aaatatatta | ggtgtatcgt | agatattttt | ttttatgggt | agtaattatt | 3240 |
| attttttaaaa | gtaatttttt | atagattgatt | taatttttat | aaattatatt | tttaattttt | 3300 |
| aaatgttttt | ttaaaatata | tgtaaaaaagt | attttatagg | gttttttaaaa | aatgtgaatt | 3360 |
| tgttaaatta | tatgtaaatg | gtataaagaa | ttttataagt | tttgaaagaa | aaaggagata | 3420 |
| tatatatatt | tttatggaga | atagtaattt | ttattttttt | gttaggatatt | agatattagt | 3480 |
| tagaaaggta | agttgttttt | ttaaaatgtt | aaagttatag | agagagaaat | taaaataagt | 3540 |
| ttattttgtt | ggattaagaa | cgttttttta | gaaatgtttt | atgggtttgt | agaagttaag | 3600 |
| ggtcgagaga | gtgagaagg | aggaaggaa | gtgttcgtat | gtgcgagtg | tttagtgtgt | 3660 |
| gaattaggta | gagagagtgt | gtggatgtgt | ttgtgcgtgg | aatggtaggg | attcgggaag | 3720 |
| tagtttagtag | gtagggtatt | tggtagtttt | tttcgggtaga | tacgtagttg | ggttattgta | 3780 |
| tagcgttgga | tgaatggtag | tggggagtga | gggg | | | 3814 |

<210> 276

<211> 3223

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 276

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| cgaggtagtc | ggattacgaa | gttaggagtt | cgagattagt | ttgattaata | tggtgaaatt | 120 |
| tcgttttttat | taaaatataa | aaatttagtcg | ggcgtgggtg | tgtatatttg | taatttttagt | 180 |
| tattcgggag | gttgaggtag | gagaattatt | tgaatttggg | aggcggagat | tgtagtgagt | 240 |
| taagatagtg | ttattgtatt | tagtttgggt | aataaaataa | gatttcgttt | taaaatagaa | 300 |
| aaataaaaaa | aataaaaaat | aataataata | ataaaaattta | ttagtttagt | tttatatggt | 360 |
| tattttattgt | tagtttagttt | ttattttttta | tagtagaggt | atttaattttt | tgggttaggg | 420 |
| gttcgtattg | gtttatagtt | tgttaggaat | taggttgtat | aataggaggt | gagtggtagg | 480 |
| tgagtgaat | tttatttgta | gttatagtta | ttttttatta | ttcgtattat | tatttagagtt | 540 |
| ttattttttg | ttagatttagc | ggcgttatta | gattttttata | ggagttcgaa | ttttatttta | 600 |
| aattgtttat | gtgagggatt | taggttgtaa | gtttttttatg | agaatttaat | gtttgatgat | 660 |
| ttgttacggt | tttttattat | tttagatgg | gattatttag | ttgtaggaaa | ataagtttag | 720 |
| ggtttttatt | gattttatac | gatggtgaat | tgtggaatta | ttttattata | tatattataa | 780 |
| tgtaataata | atagaaataa | agtatataat | aaatgtaatg | tgtttgaatt | atttcgaaat | 840 |
| attttatttt | tggtttggtga | aaaaattggt | ttttatgaaa | ttagtttttg | gtgttaaaaa | 900 |
| gttgaggat | tattgtttta | tagaatttat | cggttattttt | ttttttttttt | atttttttgt | 960 |
| tttaaaagta | tattttgtaa | atttgttatg | aattgatatt | ttgtttttat | ttttttttttt | 1020 |
| tttgtgtttg | tgtttggagg | aagaggataa | aggataagtt | gttttaagtt | ttagcgggta | 1080 |
| gttcgaagaa | gtgaaattta | tacgttggtt | ttttgtttttt | ttattaagtt | tttattatgg | 1140 |
| taatttttgg | tttcgttttag | ttattattat | tttatttagt | atatttttaa | tttttagttag | 1200 |
| ataaggttgt | tgatataaga | gagtttttag | gggtatagag | agagtttgga | tacgtgggga | 1260 |
| gttagtcgtg | tattatcggg | ggcggtcggg | tatatggtag | ggatgaggga | aagattaaga | 1320 |
| gttttttgtt | gggtttaagt | tttagataga | taaaatttag | ataattacgt | ggttggttgt | 1380 |
| atgttttgtg | gttgttgggt | tgggttttag | aggaggagg | ggcgtttttt | tttggagggtg | 1440 |
| gttttagagta | tcgggtggat | agttttgggg | gaaaattttt | acgttttgat | ggaggttatt | 1500 |
| tttgataatt | ttatagtgat | ttgggttcgtt | aaaggaaaag | taggtaacgt | gagttgtttt | 1560 |
| tttttttttt | aagttgaata | ttaggggttt | taggtttttt | gggttattcg | gtatggtaga | 1620 |
| tagttaattt | gtaggatat | tcgggagaga | tagatatagg | tagagggtag | aaaggtttaag | 1680 |
| ggaggttttt | aggtttaagg | tattgggggt | tgtttaattg | tttttgaatg | tttttatata | 1740 |
| cgtatatata | tagagtagta | tatatatata | tatatatatg | tttttagtaag | tttttagagag | 1800 |
| ggaggtgtcg | agggggattc | gttgggttgt | tagacggatt | tttagagtta | gtgagtggtg | 1860 |
| ggggttgga | tatgagttta | tttatttttt | gttttatatt | ggtataaaaag | gaggtagtgg | 1920 |
| tttatagagg | agtatagttg | tgtttgggtg | tagggttaag | agcgttggtta | agaagattta | 1980 |
| tacgtttttt | tttagtagtt | gaatttttgt | agtttagtag | tcgtcggttag | agtaggacga | 2040 |
| atcgtaatc | gtaaggattt | tttgagaatt | ttaggtagga | gaaaagtaaa | tttttttttaa | 2100 |
| ttttttattt | cgggtttadg | gtagagaatt | cgttttttta | gaattttttt | tttttatgat | 2160 |
| ttttcgttat | ttttttattt | tttttttttc | ggattttgtag | ttttgggtcg | attttgtttt | 2220 |
| aggggtgatt | gtaggagagt | agggaggatg | gttaggcgtt | attaataatt | ttattattta | 2280 |
| gtaataagaa | ttttgatttt | tttagttttt | ttgtatttaag | atattttatt | attttttatt | 2340 |
| ttatgtttgt | taatttgaat | gaaataatcg | ttgtgtgagg | attaagagaa | ttaagggttg | 2400 |
| gtattgtggt | ttatgtttgt | aatttttagta | ttttgtgagg | ttgaggtagg | tagataattt | 2460 |
| gagtttagga | gtttgagatt | agtttgggta | atatggtaaa | attttgtttt | tttaaaaaaa | 2520 |
| tataaaaatt | agttgggcgt | gttgggtgtg | ttgtattttt | agttattttg | gaggttgagg | 2580 |
| tgggaggatt | gttttagttg | gggaggcgga | ggttgtaggg | agttaagatt | gagttattgt | 2640 |
| atttagtttg | ggtgatagag | taagattttg | tttttaaaaa | tgaatgaaag | gaaggagaag | 2700 |
| agagagagaa | agagagagag | gaaagaagga | aggaagtaaa | gaagaaagaa | agaaagaaag | 2760 |
| aggaaagagg | aagaaagaaa | gaaaagaaaag | aaaagaaaag | aaagtaaaatt | taaagtttat | 2820 |
| gtaaatataa | gatgttgtga | taattgataa | ttgagtttg | gttaaatttt | ttttgggttg | 2880 |
| taaaggtaga | gagtggtaat | gattttttat | ttgttttttt | tttaagggtt | ttttacggga | 2940 |
| tatagaggga | agggagatgg | attggatttt | aagattttta | tagggtaaga | tgggcgaaga | 3000 |
| ttttttgtta | ttgttcgggg | ataagtttagt | ttgagtgaga | cggagtgga | tgggtttaga | 3060 |
| atttgaatat | gttatgggtt | ttttttgtat | tttgttttag | tgtttattta | ttatttgttt | 3120 |
| gtaggaaata | agaagagtag | ggtttatagt | tggttagttt | tttttttttt | tcgtttgttt | 3180 |
| tttagaacga | tttttttatt | agtttttttt | ttattgtttt | agg | | 3223 |

<210> 277

<211> 3223

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 277

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| tttagagtaa | tggaagagg | gttggtgaag | gaatcgtttt | ggaagatagg | cgaggaggga | 60 |
| ggggagttgg | ttagttgtgg | gttttgtttt | ttttgttttt | tgtaagtagg | tggttaagtga | 120 |
| atattagggg | aaggtgtagg | aagagattat | gatatgttta | ggttttaagt | ttatttttatt | 180 |
| tcgtttttatt | tagattgatt | tatttttcggg | tagtggttagg | gagttttcgt | ttatttttggt | 240 |
| ttgtgggaat | tttggaattt | agtttatatt | tttttttttt | gtgttttcgt | aaaaagtttt | 300 |
| agaagaaaag | taggtgagaa | gttattatta | ttttttgttt | ttgtagttaa | gggggaattt | 360 |
| agtttagatt | taattattaa | ttattataat | attttttgatt | tgtataagtt | ttaaatttgt | 420 |
| tttttttttt | tttttttttt | tttttttttt | tttttttttt | tttttttttt | tttttttttt | 480 |
| tttttttttt | tttttttttt | tttttttttt | tttttttttt | tttttttttt | tttttttttt | 540 |
| ttatttttag | agatagggtt | ttgttttggt | atttaggttg | ggtgtaatgg | tttagttttg | 600 |
| gttttttgta | gttttcgttt | ttttagttga | agtaattttt | ttattttagt | tttttaagta | 660 |
| gttggaata | taggtatatt | agtacgttta | gttaattttt | gtattttttt | gggagagtag | 720 |
| gtttttgtta | tgttggttag | gttggtttta | aatttttggg | tttaagttat | ttgttttggt | 780 |
| gttttttata | aagtgttggg | attataggta | tgagttatag | tgtttagttt | taattttttt | 840 |
| gtgttttttt | tagcgtttgt | tttattttaag | ttagttagga | tgaggtggga | aatgggtaag | 900 |
| gtgtttgatg | tagaggggatt | gagagagtta | aggtttttgt | tattgggtga | tggggttgtt | 960 |
| ggtgacgttt | gattattttt | tttgtttttt | tgtagttatt | tttagggtag | ggtcgtttta | 1020 |
| aggttgtagg | ttcgaggaaa | agaaaataga | ggaatagcgg | gggattatgg | agggaggaga | 1080 |
| ttttgggggag | gcgagttttt | gtttttaagt | tcgaagtaag | aggttggagg | gagtttggtt | 1140 |
| ttttttttatt | tgaagttttt | agaggttggt | tgcgattggc | gggttcgtttt | gttttgccgg | 1200 |
| cggttggtga | gttgtaggaa | tttagttggt | ggaggggggc | gtgtgggttt | ttttgatagc | 1260 |
| gtttttgggt | ttgtagttaa | atatagttgt | gtttttttgt | gggttattgt | ttttttttat | 1320 |
| attagatgtg | ggtaggaaat | agatgaattt | atgttttagt | tttattttatt | tattggtttt | 1380 |
| gggagttcgt | ttgaatagtt | agcgggtttt | tttcgatatt | tttttttttg | ggattttgtg | 1440 |
| aggtatgtgt | gtgtgtgtgt | gtgtgtgtgt | ttgtgtgtgt | acgtgtgtaa | gagtatttag | 1500 |
| gaataattga | gtaaatttta | atagttttgg | tttgagaatt | ttttttgatt | tttttggttt | 1560 |
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| ttgttttttt | tttggcgaat | taggttattg | tggagttatt | aaagataatt | tttattaaaa | 1740 |
| cgtggaagtt | tttttttagg | gttgtttatt | cgggtttttg | gattattttt | aggaaagagc | 1800 |
| gttttttttt | ttttttgggt | ttagtttaat | agttataggg | tatgtagtta | gttacgtgat | 1860 |
| gttttagggt | ttgtttgttt | aggatttggg | tttaatatag | gattttttgt | ttttttttta | 1920 |
| tttttggtat | gtgttcgggt | gttttcgatg | atatacgggt | gattttttac | gtgttttagat | 1980 |
| ttttttgtg | tttttgaggg | ttttttttgt | tttaataatt | tgtttggttg | aggttgaggg | 2040 |
| gtgttggtgt | gggttggtgg | tgggtgaacg | ggattagggg | ttattatggt | aaaagtttgg | 2100 |
| taaggaaata | ggagattaac | gtgtaagttt | tatttttttcg | agttgttcgt | taggatttgg | 2160 |
| ggtagtttgt | tttttttttt | tttttttttag | atatagatat | aaggggaaaa | gggatagaaa | 2220 |
| tagagtgtta | atttatggta | ggttttgtag | gtgtgttttt | agggttaagg | ggtgagggga | 2280 |
| ggaagagtga | tcgatagatt | ttgtggagta | gtggttttta | acgttttttg | tattagggat | 2340 |
| tggttttatg | gaagataatt | tttttataga | ttagggtggg | atggtttcgg | gatgatttaa | 2400 |
| gtatattata | tttattgtgt | gttttatatt | tattattatt | atattgtaat | atatataatg | 2460 |
| aaataatttt | ataattttatt | atcgtgtaga | attagtggga | gttttgagtt | tgtttttttg | 2520 |
| taattagatg | gtttttattta | ggggtgatgg | gagatcgtga | tagattatta | ggtatttagat | 2580 |
| ttttataggg | agtttgtaat | ttagattttt | tatatgaata | gtttagaata | gggttcgagt | 2640 |
| ttttatgaga | atttaaatgtc | gtcgttgatt | tgatagggag | tggagttttg | gtggtaatgc | 2700 |
| gagtgatgag | gagtggttgt | aattatagat | gaaattttat | ttatttggtta | tttatttttt | 2760 |
| gttatgtagt | ttggttttta | ataggttatg | gattagtacg | ggtttttggt | ttagagggtg | 2820 |
| ggtatttttg | ttgtagaggg | tggaaattgg | ttagtagtgg | gtgagtatgt | agggttagat | 2880 |
| tagtggaattt | tgttggttgt | gttggttttt | gttttttttg | tttttttggt | ttgagacgga | 2940 |
| gtttttatttt | gttggttagg | ttgagtgtag | tagtattatt | ttgggtttatt | gtaatttttcg | 3000 |
| tttttttaggt | ttaagtgggt | ttttttgttt | agttttttcga | gtagttggga | ttataggtgt | 3060 |
| gtattattac | gttcgggttaa | ttttttgtatt | ttagtagaga | cggggtttta | ttatgttggt | 3120 |
| taggttggtt | tcgaattttt | gatttcgtga | ttcgggttgt | tcgggtttttt | aaatgttggt | 3180 |
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<210> 278
<211> 5034
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically treated genomic DNA (Homo sapiens)

<400> 278

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| tagttaattt | ttgtattttt | agtagagata | aggtttttat | atgtttggta | ggatggtttc | 120 |
| gattttttga | ttttgtgatt | cgtttgtttc | ggttttttta | agtgttggga | ttataggtgt | 180 |
| gagttatcgc | gttcggttaa | gatgtagttt | taataaggag | tttggttatt | taggtttgta | 240 |
| attgattgga | ttattgtata | ttttttaaaa | ttaatgtgta | ttagtttttt | tttttttatt | 300 |
| tttttatttt | taattttcgt | attagtatgt | acgtttttat | tttatttagg | ttttttttta | 360 |
| tgagtttagg | agtattatta | ttattttttt | gtagggatta | ggattagggt | tgtgaagtga | 420 |
| atagtgtttt | tttaatttgt | agaggggaag | tagtattttt | tggtttggtg | ttgtagtttt | 480 |
| tttttaaatt | aaatagtagg | tttatttttt | ttgcggtatt | ttagaaggaa | tattagtagg | 540 |
| aatagtttta | tagatgttga | cgttttgttt | aaggttattt | taagaagttt | tgtggtattt | 600 |
| taaatgtggt | tgtatatttt | ttttttttta | aaaaatata | ttttgtagat | ttgttgaaa | 660 |
| tagaaaata | atataagtaa | gtaaagtttt | tttttagtata | gtatgttaat | tatatatttt | 720 |
| gttatatttt | gtgaaatagt | aagtaaatga | taatttttaa | ttgttggtcg | ggttttgtaa | 780 |
| aatagaagat | taaattttgt | gttttggttt | ggtaagaaaa | gaaattgtag | tattttgttt | 840 |
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<220>

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<222> (3761, 10826, 10828, 11104)

<223> unknown base

<400> 283

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| ttagaagaaa | attgtgaagt | tatttttaata | atgaattaga | ttatagggtt | tggttggttg | 180 |
| tggtgggtgta | ttttgttaatt | ttagtatttt | gggaggttga | ggcgggagga | ttatttgagg | 240 |
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<212> DNA

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<223> chemically treated genomic DNA (Homo sapiens)

<400> 284

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| ttagtttcgt | ttcgcgagtt | cggttttttc | gttttttttt | cgtttacgtt | ttgcgttttt | 1680 |
| tttttattgg | ttttatgtcg | cgtttttttc | tttaatcgta | gcgttttagcg | ttagaatttg | 1740 |

| | | | | | | |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------|
| aat t t t t c g t t | t t c g t t t g a a | t t g g g c g g g c | g c g t c g g g t t | g g a a g a a g g a | a g t g g a g g g t | 1800 |
| t g a c g t t g c g | g g c g g g c g g g | c g g g c g g g a g | g a t t c g a t t c | g g t g g g a g t c | g t t a g a g t c g | 1860 |
| g g c g t t c g g g | g a c g t a g t t t | g t a g g g t t a t | c g g g t t t t c g | t t a g a g g c g g | c g g c g g g a g t | 1920 |
| a g c g g g g a t t | g t a g g t c g g g | g t g t a g c g a a | c g c g a t t t c g | c g g g t t g c g g | t t c g g t g t g t | 1980 |
| g c g g a g c g t g | g c g g g c g t a g | t t t a t c g g g c | g g a g g t g a g c | g c g g c g t c g g | t t t t t t t t g c | 2040 |
| g g c g g a t t t t | g g g t g c g a t t | t g a c g a g c g g | t g g t t c g a t a | a g t g g t t t t g | c g g g t c g g a t | 2100 |
| c g t t t t a g g t | g a g t t g c g g t | c g g g a t t t t t | g g g a g t t g t t | c g g g g t c g a g | g g t t g a g t c g | 2160 |
| c g g g g a t t t t | t c g a g t t t t g | c g g g g a c g g g | t a g g g g a t a g | a c g c g c g g t t | t g g g t t c g a t | 2220 |
| t t t t t t t g g g | t t t t g g c g a g | g g c g t t t c g g | t g g a a g t t t t | t a g g a g g c g t | a g g c g t t g g c | 2280 |
| g a t a a t a t t t | t a g t t g t c g g | a t t t t g g g g c | g t c g g g g g t t | g c g g t c g g a t | c g t t t t g g g g | 2340 |
| t t t t c g t t a g | t t a g t t g c g g | t g t g c g t t t t | t g t g g t c g g g | g a t a g g t g a a | t t g g g t a c g g | 2400 |
| g g t t t t t t t t | a g t t t t t t t g | t t a t t a g a g t | a a t t c g t a t t | t t t t t t g t a g | t | 2451 |

<210> 285

<211> 2451

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

400> 285

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| a t t g t a a a a g | a g g t g c g a g t | t a t t t t g a t a | g t a a a g g a g t | t a a g a a g g g t | t t c g t g t t t a | 60 |
| a t t t a t t t a t | t t t c g g t t a t | a g a a g c g t a t | a t c g t a g t t a | g t t a g c g g g g | a t t t t a g g a c | 120 |
| g a t t c g a t c g | t a g t t t t c g g | c g t t t t a a a g | t t c g g t a g t t | g g g g t g t t g t | c g t t a g c g t t | 180 |
| t g c g t t t t t t | g g g a g t t t t t | a t c g a g a c g t | t t t c g t t a g a | g t t t a g g a g g | a g t c g g g t t t | 240 |
| a g g t c g c g c g | t t t g t t t t t t | g t t c g t t t t t | g t a g a g t t c g | g g g g g t t t t c | g c g g t t t a g t | 300 |
| t t t c g a t t t c | g g a t a g t t t t | t a g g a g t t t c | g g t c g t a g t t | t a t t t g g g a c | g a t t c g g t t c | 360 |
| g t a a g g t t a t | t t g t c g a a t t | a t c g t t c g t t | a a g t c g t a t t | t a a a g t t c g t | c g t a g g a g g a | 420 |
| g t c g g c g t c g | c g t t t a t t t t | c g t t c g g t a a | g t t g c g t t c g | t t a c g t t t c g | t a t a t a t c g g | 480 |
| g t c g t a g t t c | g c g g g g t c g c | g t t c g t t g t a | t t t c g g t t t g | t a g t t t t c g t | t g t t t t c g t c | 540 |
| g t c g t t t t t g | a c g g g g a t t c | g g t g g t t t t a | t a g g t t a c g t | t t t c g g g c g t | t c g g t t t t a g | 600 |
| c g g t t t t t a t | c g a g t c g a g t | t t t t t c g t t c | g t t c g t t c g t | t c g t a g c g t t | a g t t t t t t a t | 660 |
| t t t t t t t t t t | t a g t t c g g c g | c g t t c g t t t a | a t t t a a a c g a | a a a c g a a g a t | t t a a a t t t t g | 720 |
| g c g t t a a g c g | t t g c g a t t g a | a c g g g a a a g c | g c g g t a t g g g | a t t a a t a g g a | a g g g a g c g t a | 780 |
| g g g c g t g g g c | g g g g a g g g g g | c g g g g a a a t c | g g g t t c g c g g | g g c g g g g t g | g c g t g t t c g c | 840 |
| g g g c g a g t t a | t t t a c g t a t t | c g g a g g a a a a | t a t t t g g g t g | t a t t t t c g g c | g a g g g c g g t t | 900 |
| g g c g g a g g g t | a g a g g t g g a a | t a c g t t t t t a | t c g a g a t a a t | t c g t t t t g t t | a t t t t t t t t t | 960 |
| t a a a g g a t t a | a a t a t t t g g g | a t a t t a t a a t | a t t a t t t a t t | g t t a g a a g a t | t t a a a a t t g t | 1020 |
| t a a a a a t t a a | a a a t a g g c g g | g a c g c g g t g g | t t t a c g t c g g | t a a t t t t c g t | a t t t t g g g a a | 1080 |
| t t g a a g t a g | g a a g a t t t t t | t g a g t t c g g g | a g t t t a g a a t | t a g t t t g g g t | t a t t t g g a g a | 1140 |
| g a a t t t a t t t | t t a t a a a a a a | t t c g t t a g g c | g t g g t g g c g t | t t t t g t a g t t | t t a g t t a t t g | 1200 |
| g g a t a g t t g a | g g t g g g a g g a | t c g t t t g a g t | c g g g g c g g t c | g a g g t t g t a g | t g a g t t g a g a | 1260 |
| t c g c g t t a t t | t g a t t t t a g t | t t g g g c g a t a | g a g t a a a g t t | t t g t t t t a a a | a a a a a a a a a a | 1320 |
| a a a a a a a a a a | a a a a a t c g a a | a t t t t t t t t t | t t a g t t g t a t a | t a t t t t a t t a | a a t a t a a a a a | 1380 |
| t a a t t a a t t a | t a t a a a g t a g | t t t g g t g t g t | t t t t t t t t g t | t a t a c g t g t a | t t t t t t t t t t | 1440 |
| t a a a a g t a t a | g a a a a a a a g g | t t a t a a t a t a | t a t a a t a c g a | t t t t a t a t t t | t g t g t t t t t t | 1500 |
| g t t t t t a a a t | a t t t t g a g g t | t a t t t t t a t t | g a a t a t a t t t | t c g t t t t t a t | t t t t t g a t g g | 1560 |
| t t g t a g a g t a | t t g g g t t t c g | g g a a a t t a t a | a t t t a t t t a a | t t a t t a t t a t | t g t t a t a t a t | 1620 |
| t t a g g t t t a t | a a t g t t t t g t | t a t t a g a a a a | t a t t t t t t a a | t t g a a a t g g t | t t g t g t a t g t | 1680 |
| t a a g a t g g g t | g a a t t t t t a a a | a t a a t t t t a t | a t a g g a t t t t | a t c g g g g t t t | g t t t t a g t t g | 1740 |
| c g t t g g t g g t | t a g t g g g g t t | t a g t a g g t t a | t t t g g g g t g a | a g t g a a t g g a | g t t t a a a t a c | 1800 |
| g t t t t t g g t g | a t a a c g g g t t t | t t t t g t t t t a | t t t a t t t t t t | t t t a g t t t t t | t a g t a a t t t t | 1860 |
| t g g a g t t t g g | t t t t t t t g a t | t a g g g a g g t t | t c g a t g t a g g | g g a t t t t t t g a | g g a t t t t t t a | 1920 |
| t t t t t t t t a g | a g a g t t t t a t a | a g g t t a a a a t | t a t t t a t t t a | a t g a t t t t t t | g t g t t a t t t g | 1980 |
| t t t t t t t t a t | t t t t a t g t t t | t t a a g a g t g t | g g g g t g t g g t | t t t g t a a a t g | t a g a a g t a g t | 2040 |
| g a g g a g a t t t | t t a t t g t t t t | c g t t t t a a t t | a g g t a t t a t a | g a g a t t t g t a | a a a a t g t g a a | 2100 |
| t t a a a g c g t t | g t t t t t a t t t | t g t t g t t t t t | t t t t t a t a a a | a a t a a g t t a t | t g g t g t t a g t | 2160 |
| a t g a a a t a g g | t g t a t t a t t a | t t t t a a a a t g | a a t t a a t a a a | t g a a t a t t t t | t a a a t t t t t t | 2220 |
| a g t t t t a a a t | t a a a a t a t a t | a a a t a t a g t t | a g a t a t a a t t | t a t t t a t a t t | a a t a a a a a a t | 2280 |
| t t t g g t g g t t | t t t a a t a a t t | t t t a a g a g t g | t a a a g g g a t t | a t a a g a t t g a | a a a g a t t g a g | 2340 |
| t t t t t t g t t t | t a g a g t a a t t | a t a a a g a t a t | t a g t t g t t g a | t g g a a a t a g a | g a a a t t g g g a | 2400 |

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2451

<210> 286

<211> 3780

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 286

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| ttttgttttt | tatttggttt | tttggttttt | tttggttttt | tttggttttt | gtgaattttt | 120 |
| ttaagttttt | ttaattatag | ggtagttttt | tattgttagg | ttttggaata | tattgtttta | 180 |
| tttgtcggta | ttttattttt | tttttttatt | taaatttttag | tatttttttt | tatttttggtt | 240 |
| gattttgtgat | atttattaag | ttataagttg | tatatgttat | tttttgtgga | attttttttt | 300 |
| ttattttttt | taatttttaga | agtggggaga | taataattgga | gttgtgtttt | aatagtggag | 360 |
| tgataggttt | tatgttttat | agtagagtgt | ttttttgtta | tagtattggt | atagtttgta | 420 |
| ttatttttat | ttgtttattt | gtttgtttga | gttatgattg | ttttgttttag | agttttattt | 480 |
| tttagtgattg | agaggattcg | ttggaaaatg | tttttaagat | attgttaatt | ataaacgatt | 540 |
| ttggtgaaat | ttattaaatt | gtaatttttt | tatggtgaaa | tttattaaat | tgtaattttt | 600 |
| tttttgattt | tttttttaat | tatttgtttt | tataatttat | atatatataa | agtaatttta | 660 |
| gtagaatgaa | ataaatttat | tttaataatt | tgaaaaat | tataaaaaag | ttttgtaata | 720 |
| gaattatgta | ttttttatta | tttaagggtt | aggaatttat | tgtttttaag | gaataagata | 780 |
| attatgatgg | gttagttaat | tttatagatg | gaaggaagtt | taggaggttt | agtttaattta | 840 |
| gtgatagtaa | tatagtatat | aggttagttt | tggttagtg | taagtaagaa | aagtttagtat | 900 |
| gaagaagggg | aaatgtat | ttcgaagttt | ttgagtaagg | gtagaattag | gatttaaaatt | 960 |
| tagatttggt | tataaattta | gtgttttttt | gataaaaaat | aaaaataaaa | agtaaaagaa | 1020 |
| gattaaagga | aatttaaaaga | gaaagaaaat | gattgttttt | ttcgtaggat | agttatgggt | 1080 |
| gattagagga | ggtaggat | gtttaaattt | tttttttttag | tataaataaa | aggttgattt | 1140 |
| ggttatgaga | aaagttatgt | ttatgggttag | taatgtgatg | ggttaaagag | tttatgtttt | 1200 |
| taaaagtttt | gtgttttaat | tattatattt | attgtttttt | attttgtttt | ttgataattc | 1260 |
| gaattttagt | tgtttttagaa | ggttgtgttt | tttaaaattt | ttttttttta | ataagtgttt | 1320 |
| gtttgaaatg | tttggtttttt | attgtcgtaa | agaaatagta | ttagaatata | aatttaattt | 1380 |
| atttagtaag | gttatttttt | tattttttgt | agaaagggtt | tattcgttag | tagttttgtt | 1440 |
| atgagagtat | attaaataaa | ggagatagg | ttatttataa | tttgatagat | ttattttatt | 1500 |
| gttgtgttta | gtttttatta | gttggaaatg | gatttaatat | tttgattttg | attcagttgg | 1560 |
| ttagtaattt | agaatttttt | aaaagaggta | aaggtagagg | aaaataaagg | aaggaggaag | 1620 |
| taatttggtg | aatggtgaga | aaggtaaaaa | tattttttaa | taaggaagag | gaatagggtta | 1680 |
| gtttttaatg | tttgttttga | ttattataag | tatgttaggg | taaataattta | ggtttaagttg | 1740 |
| aggagttaa | gaatataaag | tatatgtatt | tttttattat | ggtagtaga | tatttaagaa | 1800 |
| gttttttgg | tgtgatttta | ttttgtgtgg | ttgttttttg | gagtagtatt | tattttattt | 1860 |
| cgttcgtttt | tttttttatt | taagtgcgtg | ttgtttttcg | atggaagatt | tgatggacgt | 1920 |
| ggaatgtagt | tttttgaggt | tttgaatta | tttttttgg | tgtgaattaa | aggttgataa | 1980 |
| agattgttat | tttaaggtgg | ataatgatga | aaatgagcgt | tagttgtttt | taagaacggt | 2040 |
| tagtttaggg | gttgggtgaa | aggatgaatt | gtatattggt | gaagttaggg | taatgaatta | 2100 |
| cgaaggtagt | tttaattaaag | taataattgg | aattttgaaa | atgtttgtat | agtttaacggt | 2160 |
| tttttttggg | ggttttgaaa | taataattatt | agtagtttta | acgttgaaat | gtggtttagg | 2220 |
| gttagtgtat | attagtggtat | agtttttagt | agttgtggag | gaagatgtag | agttagaaga | 2280 |
| tgaagaggag | gaggatgtga | aattttttaag | tatatattgga | aagcgaattg | ttttcggagg | 2340 |
| tagtagtaag | tttttataga | aaaaagtaaa | atttggtgtt | gatgaagatg | atgatgatga | 2400 |
| tgaagaagat | gatgatgatg | aagatgatga | tgatgatttt | aatgatgagg | aagttgaaga | 2460 |
| aaaagtgtta | gtgaagtaat | ttatataaga | tatttttagt | aaaaatgtat | aaaagttaaa | 2520 |
| ttagaatgga | aaagatttaa | aattattaat | attaagatta | aaaggataag | aatttttttaa | 2580 |
| aaaaataggaa | aaaaattttt | aaaaatttaa | aaggatttag | ttttgtaaaa | gatattaaag | 2640 |
| taaaaatgta | agtaagtata | gaaaaaggtg | gttttttttt | taaaagtggaa | gttaagttta | 2700 |
| ttaattacgt | gaagaattgt | tttcggatga | ttgattaaga | ggttatttaa | gatttttggt | 2760 |
| agtggaggaa | gttttttttaa | gaaaatagtt | taaataaatt | gttaaaaaatt | tttcgttata | 2820 |
| ttttattttc | gtaatagttg | atatttggtt | gtttttttta | taatgtagag | tgagaatttt | 2880 |
| ttttatcgtg | tttgataaat | gttggttagg | ttttattggt | aagaatgtgt | tgtttaaaat | 2940 |
| gtttgttttag | tttttaaaga | tggaatttta | ttttttgttt | ggttttaagt | atgtatggaa | 3000 |
| tgttatgata | ggatatagta | gtagcgggtg | ttagatatgg | aattcgtggg | gagataaaaa | 3060 |

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| tatatttgtg | aaataaaaatt | tagtattttta | ataaagtaaa | aaaaaaaaga | atggtagtat | 3120 |
| aggtttttaa | ataaatgttg | tttgtaagat | aagtatttat | ttatttttaa | ttaaatgggg | 3180 |
| aggaaagttt | ttgaagagga | atttggtttt | tttatatggt | ttatgtaggt | taagtttata | 3240 |
| tggaaattgtt | tgatatttgg | agtttggttt | atttaatttt | taattgatta | ttttatagtt | 3300 |
| ttttttgttt | tttgaatatt | tttggaatgt | atttttattt | gttttttata | tagattgtta | 3360 |
| gtattttata | tgagaagttt | aatttttagt | ggaaagtaag | gtatatagta | gggttttattg | 3420 |
| taaatgtaat | gtgaatgatt | taatgatgat | ttaaatagtt | ttatagaaag | atttaatttaa | 3480 |
| tatttatgaa | gtaattgtta | ggtggtagtt | attttttatat | gagttattaa | atttttaaaaa | 3540 |
| ttattttgtt | atgtagaaga | tattggttta | tttttttagat | gataggaatg | aggttaagaa | 3600 |
| gagttaatta | attttttaag | attttatttt | tagtggggtt | gggatttgaa | ttttgggtttt | 3660 |
| ttggtattaa | agttggtgtt | ttttttatag | atttgtgttt | ttgttggttt | tgtttagtat | 3720 |
| aatttgatta | taggtggaag | agttttgtat | agagatttat | aatgattgaa | gaattttattg | 3780 |

<210> 287

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400> 287

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| atgttgagta | aatttagtag | gagtataggt | ttgtgaaaag | agtattagtt | ttgatgttaa | 120 |
| gaaattagaa | tttaaatttt | agttttattg | agagtggaaat | tttgagaaat | taattgattt | 180 |
| tttttgattt | tatttttggt | atttgaaaaa | tgggttaata | ttttttatat | ggtaggatga | 240 |
| ttttaagagt | ttaataattt | atatgaaggt | aattattatt | tagtagttgt | tttataaata | 300 |
| ttggttgaat | ttttttgtag | agttgtttta | gttattatta | gattatttat | attgtattta | 360 |
| taataaattt | tattgtgtgt | tttggttttt | attggggatt | aaatttttta | tatgagatgt | 420 |
| tagtaatttg | tgtaaggggt | aagtagaaat | aatattttaag | gatgtttaga | aagtaagaga | 480 |
| agttgtaaga | taatttaattg | gaagttgagt | gggataagtt | ttaagtgtta | aatagtttta | 540 |
| tgtgagtttg | atttgtatgg | gatatgtaaa | aaaaataggt | ttttttttta | agattttttt | 600 |
| ttttatttga | ttagaaataa | atagtaattt | attttataag | taatatttat | ttaaagattt | 660 |
| gtgttattat | tttttttttt | tttattttat | taaaatattg | agttttattt | tataggtata | 720 |
| tttttgattt | tttacgaatt | ttatgtttga | ttatcgttat | tattgtgttt | tattataata | 780 |
| ttttatatat | atttaaaatt | aagtaaaagg | tggaaattta | tttttaaaaa | ttaaataggt | 840 |
| atttttgata | atatattttt | ggtaaatagaa | tttggaataa | atttatttaa | tacggtaggg | 900 |
| aaagttttta | ttttgtatta | taaaaaggat | agttagatat | taattgttac | ggaaatgaaa | 960 |
| tatgacggaa | aatttttaatt | aaattgttta | aattattttt | ttaaagagat | tttttttttt | 1020 |
| tttagagatt | ttgaatagtt | ttttggttag | ttattcggaa | gtaatttttt | acgtaattga | 1080 |
| gaatttggtt | ttttattttg | ggaagagaat | tatttttttt | tataatttgt | tgtatttttg | 1140 |
| ttttaatggt | ttttatagaa | ttagggtttt | ttgggtgttt | aggagttttt | ttttgttttt | 1200 |
| ttgaaagatt | tttggttttt | tgatttttgt | gttgatgggt | ttgagttttt | tttattttga | 1260 |
| tttgattttt | gtgtattttt | ggttggaagta | ttttgtatag | attgttttat | tggtattttt | 1320 |
| tttttagttt | ttttattatt | aaaatttatta | ttattaattt | tattattatt | atttttttta | 1380 |
| ttattattat | tattttttatt | agtagtaagt | tttatttttt | tttggtgaag | tttgttatta | 1440 |
| ttttcgaggg | tagatcgttt | tttagatata | tttaagagtt | ttatatattt | ttttttttta | 1500 |
| ttttttgatt | ttgtattttt | ttttatagtt | attaagtgtt | gtttattaat | atgtattggt | 1560 |
| tttgaattat | attttaacgt | taagattatt | ggtggtgttg | tttttaaagti | tttaagggaa | 1620 |
| atcgtttggt | gtatagatat | ttttaaagtt | gttagtggtta | ttttaattgg | gttgttttcg | 1680 |
| taatttattg | tttttggttt | aataatgtgt | aatttatttt | ttgtattagt | ttttaaattg | 1740 |
| atcgtttttta | aagataaattg | gcgttttattt | ttattattat | ttatttttaa | gtgataattt | 1800 |
| ttgttagttt | tagttttata | attaaaaaga | tagttttggg | gttttaggga | gtttatgttt | 1860 |
| acgttttatta | gattttttat | cgggaggtag | tacgtattta | ggtaggagag | aaggcggacg | 1920 |
| aagataaatg | aatgttggtt | tagagaatag | ttatatagga | tggaaattata | ttaggggata | 1980 |
| tttttaaata | tttggttagtt | atgataaaga | aattaatgta | ttttatgttt | ttagttttta | 2040 |
| taattttagtt | taaaatatttg | ttttggtatg | tttataatgg | tttaagtaag | tattaggata | 2100 |
| taatttgttt | tttttttttta | ttttaaagggtg | tttttatttt | tttttagtatt | ttataagtta | 2160 |
| tttttttttt | tttttggttt | tttttatttt | tggttttttt | aaaaagtttt | aagttgttag | 2220 |
| tttaacgggt | taaaatataga | atgttagatt | ttatttttagt | tgatggaaat | tagatatagt | 2280 |
| agtaggggtg | atttgttagg | ttataaatga | ttttgttttt | tttgtttggt | gtatttttat | 2340 |
| ggtaaaattg | ttggcgagtg | tatttttttt | gtagaaagta | taaaaatggt | tttgttgagt | 2400 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| aaattaaatt | tatgtttttag | tggtattttt | ttacggtagt | ggggaataag | tattttaaat | 2460 |
| agatatttgt | tagaggaaga | gggatttagg | aggtataatt | ttttagaata | attgggattc | 2520 |
| gaattggttag | gaaatagaat | aaagggtaat | aaatgtaata | attaaaaatat | agaattttta | 2580 |
| aaaatatgaa | tttttttggt | tattatatta | ttgattataa | atataatttt | ttttatgatt | 2640 |
| aaattagttt | tttatttatg | ttagaaagaa | aggtttgaat | atgttttggt | ttttttaatt | 2700 |
| aattatagtt | gttttacgaa | agaaataaatt | attttttttt | tttttagatt | ttttttggtt | 2760 |
| tttttttggt | ttttgttttt | gttttttatt | aaaaagatat | tggatttgta | gatagatttg | 2820 |
| agtttgagtt | ttgattttgt | ttttgttttag | aagtttcggg | aaatgtattt | tttttttttt | 2880 |
| atattaattt | tttttatttg | ttattgtata | aaattggttt | atgtattgtg | ttgttattat | 2940 |
| taagttgggt | gggttttttg | agtttttttt | tatttgtaag | gttagttaat | ttattatgat | 3000 |
| tattttattt | tttaaaagta | ataagttttt | gattttttaga | tgataagaga | tatatggttt | 3060 |
| tattataaaa | tttttttgta | ggatttttta | aaattatttg | atgaatttat | tttattttgt | 3120 |
| tggaattggt | ttgtgtgtgt | gtgagttata | ggggtaaatg | attgaaaaga | aggttaagga | 3180 |
| aaggattgta | atttagtaaa | ttttattatg | aaaggattgt | aatttagtaa | attttattat | 3240 |
| gatcgtttat | ggttaataat | attttgaaaa | tattttttta | cggatttttt | tagttattag | 3300 |
| gggtggagtt | ttgagtaaga | tagttatggt | ttaggtaggt | agggtagtaa | gtagaagtgg | 3360 |
| tgtagattgt | gataaatatt | tgatagggaa | gtattttggt | gtggagtata | gagtttggtt | 3420 |
| gtttattggt | aagatatagt | tttagtggtg | tttttttatt | tttgggggtt | ggaggaaatga | 3480 |
| aaggagggaat | tttataaaaag | gtggtatgta | tagttttgta | tttgggtgat | attataaaatt | 3540 |
| agttagggtta | agagggagtg | ttgggggtttg | ggtagggaag | ggaagtgagg | tatcggtaga | 3600 |
| tagagtagtg | tgttttaagg | tttagtagtg | agagttagtt | ttgtgggttg | agaaatttga | 3660 |
| gaagtttat | aggagttaga | gaggattagg | gagtataaag | agattaagtg | agaggtaggg | 3720 |
| tttgagggag | gatgtgctgt | gttttttggt | ttaaatataa | tttttagttt | gtagtagagg | 3780 |

<210> 288

<211> 2515

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 288

| | | | | | | |
|-------------|-------------|-------------|-------------|--------------|-------------|------|
| gcgatagagc | gagattttgt | tttttaaaaa | aaaagaaaaa | aatttaatta | ttttattaaa | 60 |
| gaagatatat | gaatgattaa | taagttattt | aattaaaatt | ttagttagta | tatatatatg | 120 |
| ttttgaagta | gttaaatttt | aaaatattgt | tttatgtgtg | tgtatttttt | agttaaaaaa | 180 |
| gtgtttgaaa | atagtattat | tttgaaattt | aaaattttta | attttttttt | taaatttaggt | 240 |
| agtagtggtt | ttggaagtaa | aagagaagtt | atttttaattg | ttaaagagta | tttaattaaga | 300 |
| atttataata | aatattatgt | ttaatgttta | aatttttagaa | gaattttatat | taaaagttta | 360 |
| taataagata | ggatatttat | ttttattatt | aagtaaatatt | atatttagagg | atttaattaa | 420 |
| taataaagg | taataaataa | aagataaaat | tgttataatt | agaattattata | aatattttaag | 480 |
| taaatattagg | gggattttata | gttatatatt | aaatagttta | gaaggagttt | tatatattat | 540 |
| taatgaatat | tgagaataaa | aaatagtttt | taaaattttt | ttaatttata | agggtataaa | 600 |
| aatgtataag | gtattaaaaat | aaatgtaattg | tgtatttggtg | tataaatata | gtaataataat | 660 |
| gaaaagggtt | attggggaaa | aaatttatagg | gagaagggtt | aataacgtga | agagggtttt | 720 |
| ttgttatttg | gattttttgga | aaaagatttg | ttggtttagg | tatagttgga | tgtattatgg | 780 |
| aaagtgggtt | taataaaatat | tggtattgta | ataattgtgt | atgttgatat | aaaaagaggg | 840 |
| agttaatgaa | tatttggtcg | attattttaat | aattgttttt | ttgttgaaga | aatgggtttg | 900 |
| ttggattaga | gtttaattgt | ggtttatata | ttaatgttgt | tataatagtt | agaagtttta | 960 |
| ttaagaaatt | tgttaaatta | ttaaaaagag | gaaatgaatt | ttttaggata | tttggattgt | 1020 |
| tttttttttaa | aaatttagtt | ttggttggtt | gttgtgggtt | acgttttgtaa | tttttagtatt | 1080 |
| tggtgaggtc | gaagtgggag | gattacgagg | ttaagagatc | gagattattt | tggttaaatat | 1140 |
| ggtgaaattt | tgtttttatt | gaaaatataa | aaattagttg | ggcgagggtg | tatgtgtttg | 1200 |
| tagtttttagt | tggtggggag | gttgaggaag | gagaattatt | tgaattcggg | aggcgggggt | 1260 |
| tgtagtgagt | tgagattacg | ttattgtatt | ttagtttggt | aatagagtaa | gatttagttt | 1320 |
| aaaaaaaaaa | aaaaaaaaatt | tagtttgtat | ggtagtataa | tattaggtaa | aagtatatag | 1380 |
| tagtttagatt | attgggttaat | tttaattttt | atgtgtttga | gtttttttat | ttgtaatatg | 1440 |
| gagatgatat | agtaatagtt | gattttggat | tgttaaagga | attaagtggg | tatatgtaaa | 1500 |
| gtgttttagaa | ttgtgtttgg | taagtagtag | gttgtaatat | tgtgatataa | taaatatata | 1560 |
| tatttgattt | ttatttagtt | tttggtatag | attttttagaa | attttttgtaa | ttttttgagt | 1620 |
| gataggggtg | atagaaatat | tttttattag | aatatttggt | tttgggtttt | gatataagag | 1680 |
| tttttaagat | ttttggaatt | tttaagtgat | aagagtgtat | gatagttagt | taattgggtg | 1740 |

| | | | | | | |
|------------|-------------|------------|-------------|------------|-------------|------|
| ttgggatttt | ttagataaatt | ttaggatggg | ggttattttt | tgaaagatta | aggatatgatt | 1800 |
| agaggtttgg | gattttagt | tttacgtttc | gatttttaga | gagggtaaaa | gggttggcga | 1860 |
| ttgattaatt | attaattgtt | agtgatttag | ttaattatgt | ttaagtgatg | gtatttttat | 1920 |
| taaaaaataa | attataggtt | tggagagttt | tcggtttggg | taattttaat | tatatattaa | 1980 |
| gaaggcgatg | tatttttaaat | tgtatgaaga | taaaaggttt | tgtgtttatt | tgggattttt | 2040 |
| ttggacgttg | ttttgtgtat | tttttcgatt | gtttgtttat | ttgtattttt | tataataaag | 2100 |
| tagtaaatat | aagtaaagtt | tttgagtttt | gtgagttatt | ataagaaacg | atcgaatttg | 2160 |
| ggattttttt | ttcgggaagtc | gttttttttt | ataagggaga | gagttgtttt | tttttttttt | 2220 |
| ttgcgtgtta | aatttttcgtt | tttaaattta | tttttcgtgt | gtatcgtgtt | tttaattttg | 2280 |
| ttggtgcgag | acgacgaatt | tcgggtattg | atttttagata | ataatgttat | tttatattgg | 2340 |
| ggatttcgtt | tgggatttta | aggtgtattt | attgtaaagg | tgagtaaagg | ggcggatttt | 2400 |
| aattttgttt | tttgatttcg | aggtttttgg | ttttattttt | agaattaaat | taaattaaat | 2460 |
| attgggtttt | ttttgtttt | tgtgaatgag | aaaattttgt | cgttttttaa | gattt | 2515 |

<210> 289

<211> 2515

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 289

| | | | | | | |
|-------------|------------|-------------|-------------|-------------|-------------|------|
| agatttttaga | gaacggtaga | gttttttttat | ttatagaagt | agaagggggg | ttagtattttg | 60 |
| gtttgggtttg | atttttaaat | ggagggttaag | agtttcgaaa | ttaaaggata | gagttgaggt | 120 |
| tcgttttttt | atttattttt | gtaatgaatg | tatttttgaa | tttagacga | agtttttaat | 180 |
| atgaagtggg | attgttgttt | ggggttaata | ttcgggggtc | gtcgtttcgt | attaataagg | 240 |
| ttaaggatac | gatataacg | aagagtgggt | ttaggagcgg | aggtttaata | cgtaaaagaa | 300 |
| aaaggagaat | agtttttttt | tttgtgagag | agagegggtt | tcgaaaggaa | aatttttaggt | 360 |
| tcgatcgttt | tttataatgg | tttatagaat | ttagaaattt | tatttatgtt | tattgtttta | 420 |
| ttataaagga | tatagatgaa | taggtagtcg | aagagggtata | tagggtaacg | tttagaaggg | 480 |
| tttttaggtga | gtataggatt | ttttgttttt | atgtagtttg | aggtgtatcg | tttttttggg | 540 |
| atgtgggttg | ggttaattaa | atcgaaggtt | ttttaaat | gtggtttatt | ttttaatgga | 600 |
| gggtgtatta | tttaggtatg | attgggttaa | ttattggtaa | ttggtgggta | attaatcggt | 660 |
| agttttttta | ttttttttgg | aggtcgaggg | gtgggggttg | aaatttttaga | tttttaatta | 720 |
| tgttttagtt | tttttagggg | tagttttttt | tttgaagttg | tttaaggat | tttagttatt | 780 |
| agttagttta | ttgttatata | tttttattat | ttggagattt | ttaaagggtt | agaagttttt | 840 |
| gtgttaggaa | ttaagattaa | gtaftttta | aaaagatggt | tttattattt | ttgttattta | 900 |
| ggaaattata | agggtttttg | gagattttgt | ttaggaattg | gatgaagatt | aatatataat | 960 |
| ttttattata | ttataatatt | gtagttttat | attgttagg | tataatttta | agtattttat | 1020 |
| gtgttttat | ttattttttt | taatagttta | aaattagtta | ttgttatatt | atttttatat | 1080 |
| atagataag | gaaatttaag | tatatagggg | tttaagggtta | ttagtatttt | ggtagtttg | 1140 |
| tattttttatt | ttgtgtgtg | ttgttatata | gattagattt | tttttttttt | tttttagatt | 1200 |
| gagttttgtt | ttgttgttag | gttggagtgt | aatggcgtga | tttttagttta | ttgtaaattt | 1260 |
| cgtttttcgg | gtttaagtga | tttttttttt | ttagtttttt | tagtagttgg | gattataggt | 1320 |
| atatgttatt | tcgttttagt | aattttttgta | tttttagtag | agatagggtt | ttattatggt | 1380 |
| gattaggatg | gtttcgtatt | tttgatttcg | tgattcgttt | atttcgggtt | tattaaatgt | 1440 |
| tgggattata | ggcgtgaatt | atagtattta | gttaagatta | gattttttaag | aaaaggtaat | 1500 |
| ttagatgttt | tagaagggtt | attttttttt | tttgggtggt | tagtaaaatt | tttagtaagg | 1560 |
| tttttagttg | ttatagtagt | attagtatgt | gaattatagt | taagttttag | tttaataagg | 1620 |
| ttattttttt | agtagagaag | taattgttaa | ataatcgatt | aagtatttat | tggttttttt | 1680 |
| tttttgtatt | aatatatata | attgttatag | tgttagtgtt | tattggaatt | attttttatg | 1740 |
| gtgtatttag | ttgtgtttag | attagtaggt | tttttttttag | aagtttagat | ggtaggggaa | 1800 |
| tttttttacg | ttgttgattt | ttttttttgt | aatttttttt | tttaataaatt | tttttattat | 1860 |
| gttgttgtat | ttatatttaa | atatatatta | tattttattt | agtattttgt | atattttggt | 1920 |
| gtttttataa | attggagggg | ttttaaaaaat | tattttttat | ttttaaatatt | tattgatgat | 1980 |
| gtataggatt | ttttttggat | tgtttaatat | atgattgtaa | atttttttga | atttttttag | 2040 |
| atgtttgtag | tatttgatta | tgatagtttt | gtttttttatt | tattgttttg | ttgtattgat | 2100 |
| taggtttttt | aatataatgt | tgtttaataa | tgaagataga | tattttattt | tatttttgat | 2160 |
| ttttgggtata | aattttttta | aagtttgagt | attaaatatg | atgtttgttg | tagattttta | 2220 |
| gtggatattt | tttagtagtt | aaagtaattt | tttttttatt | tttagtgata | ttattattta | 2280 |
| atttgaagag | aggatttggg | atttttaggtt | ttaaaataat | attgttttta | aatatttttt | 2340 |

| | | | | | | |
|-------------|------------|-------------|-------------|-------------|-------------|------|
| tagttaaaaa | gtatatatat | atagggtagt | gttttaaaagt | ttagttattt | taggggtatat | 2400 |
| gtgtatatatt | attgaagttt | taattttaatg | gtttatttgg | tattttatgta | tttttttttgg | 2460 |
| taaggtaatt | aaattttttt | tttttttttt | aaaagataga | gttttcgtttt | gtcgt | 2515 |

<210> 290

<211> 3107

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 290

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|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gtatgggtggt | ttagcgtttgt | aatttttagta | ttttgggagg | ttaaggtagg | tagattacga | 60 |
| ggtaggaga | tcgagattat | tttggcgaat | acggtgaaat | ttcgttttta | ttaaaaatat | 120 |
| aaaaaattag | tcgggtatgg | tggcgggctg | ttatagtttt | agttattcgg | gagggttagg | 180 |
| taggagaatg | gcgtgagttt | aggaggtaga | gtttgcgggtg | agttgagatg | atcgggttat | 240 |
| tgtatttttag | tttgggtaat | agagttaggt | ttcgttttaa | aaaaaaaaaa | aattattata | 300 |
| tgatattaag | taatgcggaa | ggtgatttaa | agggggaaag | gaatatagta | gtgtaaagga | 360 |
| aggaggttgt | agatggattt | agaatttttt | ttttattttt | attaggtgaa | agtttgagaa | 420 |
| atttgaattt | tttgtgtagg | ttgggtttgt | tttgtatata | ttgggttttt | agtgtttatt | 480 |
| tttaataatg | ttgataattt | tgaaaattat | ttgtagatat | tttgtagggt | ttatttttagg | 540 |
| aataatggtt | atttttttcgg | gtagttagaag | taaaattaa | tttaatgata | agtaaataata | 600 |
| attattatta | aaatttttta | tttatgtttg | ttaaagtaat | ttaagtatga | tttgagaagg | 660 |
| attttgtatt | ttatatattga | gtttttgtgg | atgaattgta | atttagttta | ataggttagat | 720 |
| aagattgaaa | atttaattta | ggagtatgtg | tttttaataa | tagttgagtt | ttggttaatt | 780 |
| ttagtggtta | tatttttaatt | atttatatat | tgttgagtgt | ttaaattgtg | tttaaagaag | 840 |
| gtaaaagtta | atttgaattt | aatttagttg | ttttttgttt | ttatttttaa | tttttgtatg | 900 |
| ttattttttt | ttttttgttt | ataaatatgt | tttgattatg | aggtattttt | ggagtttttg | 960 |
| aattcgttgt | gattttggaa | gttggtttat | tcgtaaatata | tttatatttt | aattaaattg | 1020 |
| ttttaaat | aattttgttg | aagttttttt | ttaataggtt | tagaaaaaat | aatggtaaaa | 1080 |
| atgaatgaaa | atttaataat | tttggaagta | gaaaaggttg | gggggtttta | taagtgtaaa | 1140 |
| tagttttatt | tttatatttt | ttttatggta | attataat | agttatattat | ataatatttt | 1200 |
| ttttgttttt | cgtatttttg | tttagggtaa | agttttttta | aataggtatt | gttaatttagt | 1260 |
| gttattaaga | aggtttggat | gtcgtttttg | gggaatat | ttaaaggagg | tgtttaaaaag | 1320 |
| gaaaaggggg | atgggttggg | agaagggtat | taggcgggta | ttttaaaatt | atttttaggg | 1380 |
| ttatagggtt | aatttatattg | gttggtggacg | ttagagtcgt | tatggtaaga | aggaagtaaa | 1440 |
| gttttttgta | ataattaaag | tttttagaag | tagcgtgttt | tattgtttat | tagtgcgctcg | 1500 |
| tgaagtttgg | tgtttattta | taggggtttt | tttagtattg | tttaggtttt | tcgagtgttt | 1560 |
| tagtatagta | gttttgagtt | tgttggtttg | gtgattaaga | tatatatttag | ggaatatgtt | 1620 |
| gtagtggg | gttttttttt | cggatttgta | tagtaaaaag | aaagggtcgt | tgggtgtttg | 1680 |
| gggtttttgg | gtagttagag | aagttatcgc | gttggcgggg | aggaggggga | tcgatgcggt | 1740 |
| ttatgtttcg | ggtagtttta | ttttttttgt | ttgcgaaggg | ttttgttcg | gcgggaggag | 1800 |
| agaggcgctg | ttatttcggg | tttttttata | tttgtcgtcg | tttgggtcga | tttcgcgggt | 1860 |
| ttcgttcggc | gttttagtcg | attttcgttt | agtttcgggt | ttatgggcgc | ggttagtagg | 1920 |
| gcgggttagg | gcggcggggc | gcgatatttg | gaggaagtgc | gggtcgtttg | ttcgggcgcg | 1980 |
| ttaagggaagt | tgtttaaaat | gaggaagagt | cgcggttcg | gcggttgagg | ttatttcggc | 2040 |
| ggcggttgga | gagcgaggag | gagcggttg | tttcgcgttg | cgttcgtttt | cgtttttatt | 2100 |
| ggcgttaggta | ggtgtggctg | cgttttttat | tcggtcggga | tttttttggt | aggagaggag | 2160 |
| gttacgggga | acgacgcgtt | gtttttatgt | ttttttttgt | tttaatttta | tcggtcggag | 2220 |
| taaaagtgtt | gaaattatgt | gaataaaata | taggtgggtt | tcgttagttt | cgtttttgaa | 2280 |
| tttatttcgcg | ttcgggattt | agaagtgtcg | tcgggagaga | gggggttagg | tttgggcgga | 2340 |
| ggggacggag | gttagatcgt | gcggaaagt | attcgggtat | tttagggcgt | ttagggtttt | 2400 |
| agggagcgcg | gaaagtgcgg | tcgcggttcg | gttttcggga | gacgcgggat | tgggattagg | 2460 |
| tatagcgcg | ggaagtgcgt | tttgaggtta | gaatattttt | ttttgggttat | ttatacgaat | 2520 |
| ttattggaaa | atgtcgtagt | gtttattaaa | gttattttaa | gtagaaatgt | ttagacgttt | 2580 |
| tatgagttta | gataaatttt | ttattataaa | aagaaatagt | agttgtattt | aaataataat | 2640 |
| ttttttgaat | tattattaaa | atttagtata | attatttttg | tggatatatt | tttattgtta | 2700 |
| agtaatttat | ttagttaatg | aatttggaga | gtaagaaagt | tttatgtagt | aaaatgtaaa | 2760 |
| tttgagttta | gagtttaagg | tgtttttttt | tgtttgtttg | tttgtttttg | gtaatgtggt | 2820 |
| tttaaaat | taagttttatt | taaaaattat | ataaatgtaa | tttatttttt | tgttggaatg | 2880 |
| tttaaggatt | agaaagataa | ttggagaagt | gagagtttga | attttttttt | acgttgga | 2940 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| tagtggtgta | aaatatTTTT | tgagttttgt | ttgatttagt | aaagatttag | tcgaatttaa | 3000 |
| gtagagttta | aagtattgta | gcgtgtagta | aaaaaaaaaa | agagttgaag | atgttggtt | 3060 |
| atatttgatt | tttggtatta | aaaataaaaa | aaggaattat | ttaattt | | 3107 |

<210> 291

<211> 3107

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 291

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ggattaaatg | gttttttttt | ttatttttaa | tattaagaat | tagatatggt | ataatatTTT | 60 |
| taattttttt | ttttttttat | tatacgttgt | aatgttttga | atTTTatttg | agttcgtattg | 120 |
| aatTTTTgtt | aagttaggta | aaattttaaaa | aatattttgt | aatattgTTT | ttaacgtaaaa | 180 |
| aaaagatttta | aattttttatt | tttttTaattg | tttttttagt | ttttgaatat | tttaataaaaa | 240 |
| gaatggattg | tatttatata | gttttttaggt | gggtttaagg | ttttggagtt | atattgttaa | 300 |
| aaatagataa | atagataaaa | agaaatattt | ttaatTTTta | atTTTaaattt | atatttttatt | 360 |
| atataaaaatt | tttttgTTTT | ttaagtttat | tggttaagta | aattatttga | taatgaaaaat | 420 |
| tattttataa | gagtaattat | gttaaatTTT | agtAgTggtt | tagaagggtt | gttgTTtgaa | 480 |
| gtaattgTT | gttttttttt | gtagtaaaaag | atTTgtTTaa | gtttataaga | cgtttggata | 540 |
| tttttattttt | gagtaatttt | gataaatatt | gcggtatttt | ttagtggatt | cgtgtaaattg | 600 |
| gttaaaggaa | aatgttttag | ttttTaagatc | gatttttttgc | cgttgTgttt | gatttttaatt | 660 |
| tcgcgtTTTT | cgagggtcgg | gtcgcgatcg | tattttttcgc | gttttttggg | ggtttgggCG | 720 |
| ttttgggggtg | ttttcgggtat | ttttcgtacg | gtttgatttt | cgtttttttc | gttttaggttt | 780 |
| gagttttttt | ttttcggcgt | agtTTTTtga | tttcgagcgc | gggtaggTTT | aggagcgaag | 840 |
| ttggcggaat | ttatttTgtat | tttattttata | tggttttagt | atTTTtattt | cgttcgatga | 900 |
| aggtagaata | agaaagggtta | tgaaagtagc | gcgtcgTTTT | tcgtaatttt | ttttttttat | 960 |
| tagaaagttt | cggtcgggta | ggggacgcgg | ttatatTTTat | ttgcgttagg | tgaggcgagg | 1020 |
| gcgggcgtag | cgcggggtta | ttcgtTTTTt | ttcgtTTTTt | agtcgtcgTc | ggggtggttt | 1080 |
| tagtcgtcgg | gttcgcgggtt | tttttttatt | ttgggtTaatt | tttttaacgc | gttcgggtag | 1140 |
| gcggttcgtta | ttttttttta | gtgtcgcggtt | tcgtcgTTTT | ggttcgTTTT | gttgatcgcg | 1200 |
| tttatgagtt | cggagtTggg | cggaatcgg | ttgaagcgtc | gggcgagggtt | cgcggaatcg | 1260 |
| gttttaggcgg | cgttaggtgt | agaggagttg | gggtggggcg | cgtttttttt | ttttcgtcgg | 1320 |
| ataagggttt | ttcgttaggta | gagaaggTgg | ggttgTtcgg | gatattggatc | gtatcggttt | 1380 |
| tttttttttt | cgttagcgcg | gtggtttttTg | tgattgtTTta | ggatttatag | atatttagcg | 1440 |
| gtttttttttt | tttgttatgt | agtgtcgggg | aagagatttt | attgtatggt | atattttttg | 1500 |
| gagtgTattt | tggttattaa | attaataagt | tttaagttat | tgtgttggag | tattcgggag | 1560 |
| gtttgggtag | tggtgagagg | gattttgttag | gtgaatatta | gattttacgg | cgtattagtTg | 1620 |
| tttaatgggg | tacgttTgttt | ttgaaggTTT | taattattat | aaaaggTTTT | gttttttttt | 1680 |
| tattatgacg | gttttgacgt | ttataattaa | ataaaTTTaaa | tttatagTTT | taagaatggt | 1740 |
| tttgagatat | tcgtttgata | tttttttttt | aatTTtatttt | tttttttttt | ttggatattt | 1800 |
| tttttttaaaa | tgTTTTtata | aaacgggtatt | tagattTTTTt | tgataatatt | ggttggtagt | 1860 |
| gtttgttttta | aaaagtTTTta | ttttaagTTta | aaatgcgaga | agtaaaaaaa | tatatatata | 1920 |
| atgtgttTga | ttgtaattgt | tatggagaaa | atatagggat | gggattattt | atattttattg | 1980 |
| gagtttttag | ttttttttgt | tttttagggtt | attggatttt | tattttattt | tgttattttt | 2040 |
| tttttttaaat | ttgttaaaaag | aaaatttttag | tagaattaaa | tttaaagtag | tttaattgag | 2100 |
| taatgaatga | tttgcaaatg | gggtagTTTT | tagaattata | gcggatttag | agatttttagg | 2160 |
| gatgttttat | ggttagaata | tatttataga | taaaaaaagg | gaagtgatat | atagaaattg | 2220 |
| gaggtaaggT | agagaaataa | ttggattggT | tataggTTTg | tttttgTTTT | ttttgaatat | 2280 |
| agtttgaaata | tttagtagtg | tatgaatggt | tgaagtattg | ttattgggat | tggttaagat | 2340 |
| ttagttattg | ttaaaggTtat | atattttTtaa | attaggTTTT | taattttgTT | tgtttattaa | 2400 |
| gttaggttat | agtTtatTTta | taaggatttta | aatatagaat | atagagTTTT | tttttagatta | 2460 |
| tatttaggtt | gttttaataa | atataaatgg | aagatttttga | taatggTTtat | atttgTTtat | 2520 |
| tattggattt | aatTTTgttt | taattattcgc | aaaaaatagt | tattgTTTT | gagatggagt | 2580 |
| ttgtagaatg | tttatagatg | gttttttagag | ttgttagtat | tattggagat | gaatattagg | 2640 |
| ggattagtgt | gtataaaagta | aatTTtagTTT | gtataaagat | tgtagtTTTT | ttaggTTTTt | 2700 |
| atttgatgga | aatgaggggg | aaatttttaga | tttattttata | atTTTttttt | tttatattgt | 2760 |
| tgTgtTTTTt | ttttttttttg | agtattTTTT | cgtattattt | agtattatgt | agtaattttt | 2820 |
| ttttttttttg | agacggagtt | ttattttggt | gttttaggtTg | gagtatagtg | gttcgatttat | 2880 |
| tttagtttat | cgtaaagTTTT | gttttttggg | tttacgtTtat | ttttttgTTT | tagtttttgcg | 2940 |

| | | | | | | |
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| agtagttggg | attataggcg | ttcgtttatta | tgttcgggta | attttttgta | tttttagtag | 3000 |
| agacgggggtt | ttatcgtgtt | cgttaggatg | gtttcgattt | tttgatttcg | tgatttggtt | 3060 |
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<210> 292

<211> 3283

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 292

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| ttaaagggat | tttttttggt | tatttcgttt | agagtagtta | ttataatttt | tgagcgttta | 120 |
| ttgttagttg | ataatatatta | gaaaaatata | aattttataa | aagtagggat | tggtttgttt | 180 |
| ttttttttgt | aggggttagg | ttttgggata | tagttgggtg | agaaagtgtg | tagttttagg | 240 |
| ttttatttaa | gttttttaggg | tatttatattc | gggatttggt | ttgtatatatt | ttatttttgt | 300 |
| tttttattgg | tattagtttt | ttcgtggaat | agtttgagtt | tttttagata | tttaattggt | 360 |
| ttttttaagt | gttggttatga | agttagattt | ttatcgtttt | ggggatattt | tttttaggga | 420 |
| gggaagtat | atgctcgttt | ttttatgtga | tttatatttt | attttggata | atttggttat | 480 |
| tatcgtagtt | tatttagatt | tgtttggttt | ttgtttattt | tagtttttagt | ttattttatt | 540 |
| tttttaaatt | tgatcgatag | ttatttttaa | tagttttatt | ataaattatt | tataaaaaatg | 600 |
| gttttaattt | tgaagtttat | ttacggagag | tatatttggt | aggtgtgtgg | tagatatata | 660 |
| ggaagtataa | gatgaggtag | tagattttaga | ggtaaatgat | tttttttttt | ttgttttagtg | 720 |
| gtgattgtta | gtattacgtt | ttttcgggag | aggtgagaaa | tttttttacg | taagtattgg | 780 |
| aatttttata | gttaagagtg | gtaaatagttt | cggttattgg | atttgggttt | gttgaatttt | 840 |
| aatattttgt | gattttatat | ttgggttgaa | ttttttgtga | gtatgatgga | atttatatgt | 900 |
| ttttttttta | gtttttattt | gtttgtatag | ttggaatatt | tggttggttt | ttttggaggg | 960 |
| atttagtacg | tttagagttt | agacgttgga | attgttaaag | tttagaggaa | agagtttttag | 1020 |
| ttgtaaagta | agagaaatgg | gttggaattt | tagttttatt | ttttaatgaa | tgtttttgat | 1080 |
| tttttttttt | tttttttttt | ttgagacgta | gtttttattt | atcgttttagg | ttggattgta | 1140 |
| tggtttacga | tttttagttta | ttgtaatttt | cgtttttttag | atttaagcga | ttttcgtggt | 1200 |
| tgagtgtttt | gagtagttgg | gattataggg | gtgcgttatt | acgttcgggt | aatttttgta | 1260 |
| tttttagtag | agatagtttt | tggttatggt | ggtttaggtg | gttttgaatt | tatgatttta | 1320 |
| agtgatttat | ttttttcggg | tttcgaaagt | tttgggatta | taggttcgag | ttatcgcgtt | 1380 |
| tagtcgtttt | tgattattaa | aaaaaaattt | tttttttggt | ggggggaacg | aagtgttttt | 1440 |
| ttgttggtta | gggttgagtg | tagtgtagtg | atttcggttt | attgtaattt | ttgtttttta | 1500 |
| ggtttaagcg | atttttttgt | tttagttttt | tgagttagtg | ggaatacggg | tggttttttat | 1560 |
| atattttagt | taatttttgt | atttttagta | gcgatgggtg | ttcgttatgt | tggttaaggt | 1620 |
| gttttcgaa | tttttggttt | taggtgattt | gttttttttg | gtttttttaa | gtgttgggat | 1680 |
| ataggcgtg | agttatcgtg | tttggttaaa | aaatttatgt | tttaaaaaga | ttagttaagt | 1740 |
| gtagttagta | gaagggggga | aagagtagag | taaggagtta | tatttggtgt | tttgatttat | 1800 |
| tttgaataag | ttatttaatt | ttttgaggat | aagttcggag | aatgggagag | atagttattt | 1860 |
| atttgtaggg | ttgttgggag | gaataagtga | tattatgagt | gtgtgttagg | tgtttgatta | 1920 |
| tagaagggtg | tttaattaatt | tgtaattatt | aattaatatt | ttagtctgtg | gtattatttg | 1980 |
| ttatttattt | ttcagagtgt | gttaagttat | gggtgcgttt | tggttagcgt | ttagttagtg | 2040 |
| taagggtttt | gggttgtagc | ggcgaatttt | tttttttcgag | tatttttttt | ttgttgaga | 2100 |
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| tcgttcgggt | atgttggtgt | ggtcgttgcg | gggttggttc | gttcgggcgt | tcggttggtt | 2280 |
| tggttcggga | agtcgcggga | gttcggtttt | aggtttcggg | tcgcggaggg | tgtagcgtcg | 2340 |
| gggttggttt | ttcggtaacg | cgctgttttg | tttcgttttt | taggagtttt | tatgcgttta | 2400 |
| tttattttcg | gtttttcggg | tttcggaatt | cgctcagatt | cgaagcgttt | ttttcgaggc | 2460 |
| gcgggatttt | tttttcgggt | gcgggttgga | cgggggcggt | tatcgttcgt | tattcgggcg | 2520 |
| cgagatcgta | gcgagcgttg | ggggcggttc | gttttggttt | tgggatggag | agaggggttt | 2580 |
| ttaaagagtag | gacggatacg | ttttgaatat | ttcggtttaa | attcggtttt | tcgattttat | 2640 |
| ttttgtttcg | attttttcga | ttttgggggc | gatggggatt | gggagttggt | tttaagtcgat | 2700 |
| tttggtttata | ttttgggtgt | agcgtggggg | aggggggtta | cgttttcggc | gtttttttgt | 2760 |
| ttttttttgg | agtggggatt | tatatagaaa | cggtttattg | tttatattcg | gttttggtgt | 2820 |
| tcgttatatg | gttggttgaga | gacgttttag | aattatttgt | gggacggatg | ggtagcgatg | 2880 |
| ttcgtttttg | gttttagagga | atatttggtt | tttaggttta | aaattacgtt | cgctcgtttat | 2940 |

| | | | | | | |
|------------|------------|------------|------------|-------------|------------|------|
| tttttttcgt | gtatcgcgag | tggagggtgt | tttgtttttt | tattttgttta | atatttagtt | 3000 |
| tgtgaagatt | taaataaata | acgtggaaaa | tgtaaagtat | aattgtattaa | gtgaaagaat | 3060 |
| tcgagtatat | tgggggttta | cgaagttgta | gttgtagttt | agggtggtat | atcggcgaga | 3120 |
| cggtagtgcg | cgtttttaaa | ttcggagggc | gtttaaaatg | gaaaatgttt | ttaggttagg | 3180 |
| gagtgagtat | aaatattagt | gtttttgtgg | ttatgtagta | aattagggtg | gaggagagtt | 3240 |
| atttaaaagt | gagtttaaaa | attgattttt | ttttttttgt | aga | | 3283 |

<210> 293

<211> 3283

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 293

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| atttgttata | tgattataaa | aatattaatg | tttatgttta | ttttttgggt | taaaaatatt | 120 |
| ttttattttt | ggcgtttttc | gagattggag | gcgcgtatta | tcgttttcgt | gatgtgttat | 180 |
| tttgggttgt | agttgtagtt | tcgtggattt | ttagtgtgtt | cgagtttttt | tatttagtat | 240 |
| tttatatttt | gtatttttta | cgttatttat | ttagattttt | atagattgga | tgtaaagtaa | 300 |
| gtggaaagggt | agaatagttt | ttattcgcgg | tgtaacggga | agagtgggcg | gaggacgtgg | 360 |
| ttttgggttt | gggatttagg | tgttttttta | ggtttagggc | gggtatcggt | gtttattcgt | 420 |
| tttatagggtg | gttttgaggc | gttttttaaa | agtttatatg | cggatattag | aattcgggtg | 480 |
| taatagtgat | tcgtttttgt | gtgggttttt | atttttaggg | agggtaggag | agcgtcgggg | 540 |
| gcgtaatttt | ttttttttac | gttggtatta | gagtgtgagt | agaatcgggt | taaggtagtt | 600 |
| tttagttttt | atcgttttta | aggtcgaag | aatcgggata | ggaaatgggt | cgggggatcg | 660 |
| agtttggttc | ggaatgttta | gagcgtgttc | gttttggttt | ttaaagggtt | tttttttatt | 720 |
| ttagaattaa | agtcgagcgt | tttagcgttt | cgttgccgtt | tcgcgttcgg | gtaacggtcg | 780 |
| atggtcgttt | tcgttttagt | cgtatgcggg | gaggaaattt | cgcgtttcgg | aagaggcgtt | 840 |
| tcgggttcgg | gcgggtttcg | gaagtcgagg | ggtcgggagt | agggtggcgt | atagggtttt | 900 |
| ttgggaggcg | ggattaagac | gcgcgttatc | gggaggttag | gttcggcgtt | gtatttttcg | 960 |
| cgggttcggg | tttgagggtcg | ggttttcgcg | atttttcggt | ttaaagtagc | gtagcgttcg | 1020 |
| ggcgggttag | tttcgtagcg | gttatagtag | tatagtcggg | cgagcggatt | tagaggttcg | 1080 |
| gggttttttt | ttgtgcgagt | cggcgcggac | gattgttagt | ttagtcgttg | ggcgtcgttt | 1140 |
| ggattttcgg | gtttgggttt | taaagagatt | cggtcgtatt | ttatttttagt | aagaggagaa | 1200 |
| atattcgaag | ggagagggtt | gtcgttggtg | gttagaagtt | ttattattgt | taggacgttg | 1260 |
| gtagaacgta | tttataattt | ggtaaatatt | tggaagtgga | tggtaaataa | tatttagcgat | 1320 |
| tgaagggtta | attaatgatt | gtagattaat | tgaatatttt | ttgtaattag | atatttggtg | 1380 |
| atattttatg | atgttattta | ttttttttta | taattttgta | aatagataat | tggttttttt | 1440 |
| tttttcgag | tttgttttta | gagaattagg | taatttggtt | aaaatgggtg | gaagtaatag | 1500 |
| ttataatttt | ttgtttttatt | tttttttttt | tttttattat | tgtatttgat | tagttttttt | 1560 |
| aaaaataaaa | tttttttggt | aggtacgggt | gtttacgttt | gtaatttttag | tatttttgga | 1620 |
| ggttaaggaa | ggtagattat | ttgaggttag | aagttcggag | ttagtttttg | ttaatatggc | 1680 |
| gaaattttat | cgttattaaa | aagtgtaaaa | ttagttgggt | gtggtggggg | gtattcgtat | 1740 |
| tttttagttat | ttaggagggt | gaggtaggaa | aatcgtttga | atttgggagg | tagagattgt | 1800 |
| agtgaatcga | gattattgta | ttgtatttta | gtttgagtaa | tagagggata | tttcgttttt | 1860 |
| ttcgttaaaa | aaaaaatttt | tttttaattg | ttagaagcgg | ttgggcgcgg | tggttcgggt | 1920 |
| ttgtaatttt | agtattttcg | gaggtcggag | aaggttagatt | atttgagggt | atgagtttaa | 1980 |
| gattagtttg | attaatatgg | ttaaaaattg | tttttattaa | aaatataaaa | attagtcggg | 2040 |
| cgtggtagcg | tacgtttgta | atttttagtta | tttaggaggt | ttaggtacga | gaatcgtttg | 2100 |
| agtttgggag | gcggagggtt | tagtgagttg | agatcgtggt | tattgtaatt | tagtttgggc | 2160 |
| gatagagtga | gattacgttt | taaaaaaaaa | aaaaaataaa | aaaattagaa | gtattttatta | 2220 |
| aggggtgaag | ttagaatttt | agttttattt | ttttgttttg | tagttggagt | tttttttttt | 2280 |
| gaattttgat | agttttagcg | tttagatttt | aaacgtatta | gattttttta | gaggaggtaa | 2340 |
| ttaaatattt | taattatata | gataagtagg | gggttagggg | gaagtatgta | aattttatta | 2400 |
| tatttagtaa | aaatttagtt | tagatgtgga | gttatagagt | attagaattt | aataggttta | 2460 |
| agtttagtaa | tcggagttgt | tgttattttt | gattgtgaag | gttttagtgt | ttgcgtggag | 2520 |
| gggtttttta | tttttttcgg | gagggcgtga | tggttgtagt | tattattagg | tagggagaag | 2580 |
| gaagttattt | gttttttagat | ttgttggttt | attttgtgtt | ttttgtatat | ttgttatata | 2640 |
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| ttgagatggg | taggattttaa | atagatttga | atgaattaog | gtgatgggta | aattattttaa | 2820 |
| gatagaatgt | aaattatata | aaaggagcga | tatatatttt | ttattttttaa | aaagggaatgt | 2880 |
| tttaagacgg | tggagatttg | gttttatggg | agtattttgag | aaaaaatatt | aagtatttga | 2940 |
| agggatttag | gttgttttac | ggaagaatta | gtattagtgg | gaggtaaaag | taaaaatatg | 3000 |
| tagaataagt | ttcgagtgtg | atgttttggg | ggtttgata | ggatttgagg | ttgtatatatt | 3060 |
| tttgtattaa | ttatgtgtta | gaatttgggt | tttgtagggg | gagaagtaga | ttagtttttg | 3120 |
| tttttgtgga | atttgtattt | ttttgatata | tattagttag | taataaacgt | ttagaagtta | 3180 |
| tggtgggtgt | tttagacggg | atgattaaag | gagatttttt | ttaaggaggt | gatattttata | 3240 |
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<210> 294

<211> 3197

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 294

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| tttttgggag | gttttagcgg | gtggattatt | tgagggttagg | agttttaagat | tagtttggcg | 120 |
| aatatggtga | aattttattt | gtattaaaaa | tataaaaatt | agtttagtgc | gcggtatttg | 180 |
| ttttagtatt | tagttattta | ggaggttgag | gtagaagaat | tatttgaatt | tgggaggtag | 240 |
| aggttggagt | gagtttagat | taggttattg | tatttttagtt | tgggcgatag | agggagattt | 300 |
| tatttttaaaa | taaaataaata | aataaataaaa | taaaatatag | aagatgtata | gtaaaaatac | 360 |
| ggtaattgtt | tttgtttggt | tgtttttgaga | taggggttttg | ttttgttatg | cggattggag | 420 |
| tgtagtggtta | ttattaggtt | tattgtagtt | tcgatttttt | tggtttaagt | gtttttttta | 480 |
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| tttaagtaat | ttttttatat | tagtttttta | aagtgttaag | attatagatg | ttagtatttg | 660 |
| tatttagtta | gtaatatata | tttatgggat | tatttttata | tttgttggtt | tttgttgatt | 720 |
| taatatattt | tatgtaatgt | atgattgtta | ttattattat | tatttttatt | ttttagatgg | 780 |
| gaaaattgag | gtataaagaa | tttaatttgt | ataagtttat | ttgttttagtg | atggaataaa | 840 |
| gatgtgaatt | taggtagttt | ggtttttaaag | tttatacgtt | taataattat | attagattat | 900 |
| tagattgttt | tttttttttt | tttttttttt | tttttgagat | ggagttttat | tttgttattt | 960 |
| aggttggagt | atagtgggtga | gatttcggtt | tattgttaatt | tttgtttttt | gggtttaagt | 1020 |
| aatttttttg | ttttagtttt | tttagtagtt | gcgattatag | tcgttcgtta | ttatatttag | 1080 |
| tttaatttttg | tatttttagt | agagatgggg | ttttattatg | ttggttaggt | tgggttttaa | 1140 |
| tttttgattt | ttgggtgattt | ttttatttcg | gttttttaaa | gtgttgggat | tataggcgtg | 1200 |
| gttatttacg | tttagtttag | attgttttat | ttttgtattt | gtattttatt | atttatttat | 1260 |
| ttgagatag | ggttttgttt | tgtagtttag | gttgaagtgt | agtgggtgaa | tttagtttat | 1320 |
| atagttttt | atttatcggg | gttttaaagga | tttttttggt | ttagtttttg | gagtagttgg | 1380 |
| ggttataggt | atgtattatt | atgttttagt | aattttttaa | tatttttttg | tagaagtagg | 1440 |
| gttttattat | gttgtttaga | ttggttttaa | attttttagt | tttaagggat | tttttgtttt | 1500 |
| ggtttttttaa | agtgttgaga | ttataggtat | gagttatgta | tttagttttt | ttttaaaatt | 1560 |
| tttttgagag | ataagatttt | gatttggtgt | ttaggttgga | gtgtagtggg | gagattatag | 1620 |
| tttattgtag | ttttaatttt | tgggtttaag | tattagattt | tttttattat | attttatttt | 1680 |
| atacgcgtgt | ggtttttaatt | ttgtttttgt | tatttttttag | ttgtatgttt | taatttaatt | 1740 |
| tgtttggttt | tgtttttttt | aatagaagga | cggttttggt | tacgggttat | agttagtaac | 1800 |
| gtttaagtat | tagggtcggc | gagtgttttg | tcgtgggtacg | gttttagcgt | cgcgttttcg | 1860 |
| aatttatattg | tttttttttaa | cgagagaagg | tttttagatga | gggttggaatt | tttttcgttt | 1920 |
| cgtttacggg | ttttgaacgt | tgggggagga | gtgtatgggg | aggggcgggt | tttaaaccggg | 1980 |
| ttattgttat | taatagagat | tttaaataac | gtttgttaaa | aataattcgat | tggaggagta | 2040 |
| taaaagcgta | gtcagagtta | gcgttttcgta | tttttttgag | tagacgttta | gagtagagtt | 2100 |
| agttagtag | atcagacgtc | gcgttttttt | ttcggttttg | cgggttttta | gttgggattt | 2160 |
| ttttcgcgat | tggtattcgt | atagtcgttt | tttcgattag | gttttcgggt | tgtttcgggt | 2220 |
| gtcggaggag | tggtcgtagt | ggttaggcgg | tagtagttgg | ttaggttacg | tcggtttttt | 2280 |
| gtttttcgtc | gttatcgaga | gtttcgtagt | ggtcgcgttc | gtttatagtc | gcgcgttttag | 2340 |
| tcggtaattt | agtagcgggg | tttcggagat | tcgggtatatt | gcggatcgtt | ggcgcgtgtt | 2400 |
| tttgatgttt | aattatttcg | tttcggacga | gttgacgggt | aagattaagg | atggcgtggg | 2460 |
| ggagattatc | ggtgagtttt | tttgtttttg | taggggagag | gaggaggtta | gtagggcggg | 2520 |
| tagggtcggg | ggcgtgcggg | tgaaacgggg | gtttcggggg | tttggggagt | taaacgttgg | 2580 |

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| ttagtatcgc | ggaaaaatag | gatttttgcg | ttttttgttt | aggaattggg | agtgcgggtc | 2640 |
| gtttttaagg | gcgttttttg | ttttgtaatt | ttagcgtttt | gggagggtcg | gacgggagga | 2700 |
| tcgtttgagg | ttaggagttt | aagattagtt | tgggtaatat | agcgagacgc | gttttttcgt | 2760 |
| ttcgatttcg | cgttattata | aaaaaaaagt | aaataaaaaat | ttttttaaag | attatcgatg | 2820 |
| aagagagaaa | atgcgttttt | ttatagagtt | ttttttttat | ttatagtttt | atttttagat | 2880 |
| aagcggggag | ttttttggcg | cggtgttagt | tttttagtcg | tgagtgggcg | tgtgcgcggt | 2940 |
| tttaagtgcg | tttgcgtatt | gtttattttt | tagtttcgcg | ttttgtttcg | ttttttttaa | 3000 |
| aattttgaat | cgaagaattt | ttcggaagtt | tttgagagtt | tagatcggcg | ggtacgtttt | 3060 |
| tatttttaat | tttttttgtt | aatttttatt | agtttgtagt | tttggttgtt | tttaagtagg | 3120 |
| aggtgggggt | tttggtttag | cgggggtcga | aggtagtttt | ttttttcgta | gtttgatttt | 3180 |
| tttttttttt | ttaaagg | | | | | 3197 |

<210> 295

<211> 3197

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 295

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| ggtttagagg | tttatttttt | gtttggaagt | agttaggatt | gtaggttggg | agggattaat | 120 |
| agaggggggt | ggggatgggg | gcgtgttcgt | cggtttgggt | ttttagaaat | tttcggaaag | 180 |
| tttttcgatt | tagagttttg | ggaggaacgg | agtagggcgc | ggagttgggg | agttagtagt | 240 |
| acgtaggcgt | atttgagtc | gcgtatacgt | ttatttagcg | gttagaaatt | ggtatcgct | 300 |
| tagggaattt | ttcgtttatt | tggggatggg | gttgtgggtg | ggaaggggat | ttttagaaaa | 360 |
| agcgtatttt | ttttttttat | cgatgatftt | taaaaaaatt | tttgtttgtt | ttttttttgt | 420 |
| aatggcgcgg | ggtcggggcg | ggggggcgcg | tttcgttatg | ttgttttagg | tagttttgaa | 480 |
| tttttggttt | taagcgattt | tttcgtttcg | gttttttaaa | gcgttgggat | tatagagtag | 540 |
| aaagcgtttt | tagaagcgat | tcgtattttt | aatttttagg | taagggaatt | aggagttttg | 600 |
| tttttttcgg | tgttggggta | acgtttaatt | tttttaggtt | tcgggatttt | cgttttaatc | 660 |
| gtacgttttc | ggttttgttc | gttttggttag | tttttttttt | ttttttgtag | gagtaggggg | 720 |
| gtttatcggt | gatttttatt | acgttatttt | tggttttgat | cgtagtttcg | ttcggggcga | 780 |
| agtggttgat | atttagggat | acgcgttagc | ggttcgtagt | gtgtcggatt | ttcagagatt | 840 |
| cgttgttgag | ttgtcgggtg | agcgcgcggt | tgtaggcggg | cgcggttatt | gctgggggtt | 900 |
| cgatggcggc | ggggggtagg | gggcgtacgt | agtttggtta | gttgttgcgc | tttaattatt | 960 |
| gcgattattt | tttcggtagt | cggggtagtt | cgaaggtttg | gtcgaagagg | cggttatgcg | 1020 |
| ggtattagtc | gcggaagggg | tttttagttg | ggtttcgtag | gagcgagaag | gggacgcggc | 1080 |
| ttcggttat | gttggttgat | tttgtttttg | acgtttgttt | agaaaagtgc | ggggcggttg | 1140 |
| tcgggttcg | gtttttatgt | tttttttagt | gggtattttt | agtaggcggt | gtttgaggtt | 1200 |
| ttattaatg | gtaatgatcc | gtttgagggg | cgtttttttt | tatgtatttt | tttttttagc | 1260 |
| tttaggggtc | gtggggcggg | cgaagagggg | tttagtttta | tttggaattt | tttttcgtta | 1320 |
| aggaaagtaa | atgaattcga | gagcgcgacg | ttggagtcgt | gttacggtag | ggtattcgtc | 1380 |
| ggttttgggt | tttaagcggt | gttggttggg | gttcgtgggt | agggtcggtt | ttttgttaag | 1440 |
| gaggatagag | ttagataggt | tgggttgggg | tatataattg | agaagtggta | gaggtaggat | 1500 |
| tgggaattata | cgcgtgtgag | atagaatgtg | ataaaaaggag | tttggtgttt | gagtttagga | 1560 |
| gttgaggttg | tagtgagtta | tgatttttatt | attgtatttt | agtttaggta | atagattaaa | 1620 |
| gtttttgttt | ttaaaaaaat | tttaaaaaag | ggttgggtgt | atggtttatg | tttgtaattt | 1680 |
| tagtattttt | ggaggttaag | gtagaagggg | tttttgaggt | taggagtttg | agattagttt | 1740 |
| gggtaatat | gtgagatttt | atttttatta | aaaaatattt | aaaaattagt | tgggtatggt | 1800 |
| gggtgatgtg | tgtggtttta | gttatttttag | aggttgaagt | aggaggattt | tttgaatttc | 1860 |
| ggtgagtaga | ggttggtgtg | agttggattg | tattattgta | tttttagttg | ggttatagag | 1920 |
| taaaattttg | ttttaaaata | agtaaatgaa | taaatataaa | tataaaaaata | aagtagtttg | 1980 |
| ggttgggcgt | ggtggtttac | gtttgtaatt | ttagttattt | gggagatcga | ggtgggagga | 2040 |
| ttattagagg | ttaggagttt | gagattagtt | tgggttaatat | ggtgaaattt | tatttttatt | 2100 |
| aaaaatataa | aaattagttg | ggtgtggttg | cgggcgtttg | taatcgtagt | tgttggggag | 2160 |
| gttgaggttag | gagaattggt | tgaatttaga | aggtagaggt | tgtagttagt | cgagatttta | 2220 |
| ttattgtatt | ttagtttggg | tgatagagtg | agattttatt | ttaaaaaaaa | aaaaagaaaa | 2280 |
| aagaaaaaag | taatttagta | atttggtgtg | gttggttaggc | gtgtggattt | tgaagttaga | 2340 |
| ttggttgaat | ttatattttt | gttttattat | taagtagatg | aatttgtgta | agttagattt | 2400 |
| tttgtgtttt | agttttttta | tttgaaaaat | agagatgata | atgatggtaa | tagttatgta | 2460 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| ttgtataaag | atgtgtaagt | tagtaaggga | tagtaaatat | gaagggtggt | ttataaaatt | 2520 |
| atattatttg | ttgggtgtag | tggttgatat | ttgtaatttt | agtatttttg | gagggtgatg | 2580 |
| tgggaggatt | atttgaagtt | agaagggttg | aataagtttg | ggtaatatag | tgagatttta | 2640 |
| tttttattaa | aatttagaat | aaattagtta | ggtatggttg | cgtggatttg | tagttttaga | 2700 |
| tatttaggag | gttgagggtg | gaggagtatt | tgagttaagg | aggctgaggt | tgtagttagt | 2760 |
| ttgatggtg | tattgtattt | tagttcgtat | gatagaataa | gattttgttt | taaaataaat | 2820 |
| aaataaaaa | aattatcgtg | tttttattgt | atatttttta | tgttttattt | atttatttat | 2880 |
| ttatttattt | tgagatggag | tttttttttg | tcgttttagt | tggagtgtag | tggtttgatt | 2940 |
| taggtttatt | tttaatttta | tttttttagt | tttaagtatt | tttttgtttt | agttttttga | 3000 |
| gtagttggga | ttataggtaa | gtgtcgcgat | attggttaat | ttttgtattt | ttagtataga | 3060 |
| tggggtttta | ttatgttcgt | taggttggtt | ttgaattttt | gattttaagt | aatttattcg | 3120 |
| tttgggtttt | ttaaagtgtt | aggattatag | gcgtgagtta | tcgcgttttg | ttatttttta | 3180 |
| tttttagaaa | tattaat | | | | | 3197 |

<210> 296

<211> 3155

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 296

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| ttgttattaa | ttatatgtat | ttattaaatt | atgttagttt | tattttttta | ataattgtag | 120 |
| tttaatatatt | gaataattga | ataaaaaatt | ataatttaat | ttttttaata | tttattttatt | 180 |
| tttaattttat | ttttataatt | tatatataat | ttataattat | ttttatataa | ttggtatagt | 240 |
| gataatttta | gataaaaatt | attgaatttt | tattttttatt | tttgtaaatg | atatatatat | 300 |
| ataatgtaat | gttgagaggg | ttgggaagga | agaatgggag | aaaggtagaa | gttgatagtt | 360 |
| aaaaaaaaa | agttttttaga | tggttttttt | agtgttattt | ttgtaatttt | attaaataag | 420 |
| ggtttaaaat | ttatgtttata | atatttgttt | gatgttttat | ttaaattggt | ttattggata | 480 |
| ttttttattt | gttaagtttt | ttgaaagaaa | taaaattggt | ttgttatagt | tagattttat | 540 |
| gattttatat | atttataacg | ggtagatttt | gtaggggttt | atatttttta | agggtggttg | 600 |
| ggaaaatgat | atagaaaagt | tttatattag | ttgaaaagaa | aaatgtataa | tttatttttg | 660 |
| taatttttagt | tttaattttt | aataggataa | aggaaatatg | tatattataa | attaatgttt | 720 |
| tgtgttaata | aataattaag | taagtagagt | tgtaagtatt | ggtaaaaatg | aattttggat | 780 |
| atttttagtt | attaaatttt | tcgaggtaag | gtagatatat | atttggattt | gaatatttgt | 840 |
| attattaggg | aatttttggt | tggttggttt | atattgtttt | gttattttta | aaagtaggtg | 900 |
| ttaaattagg | ttatttggtg | tttgggtaat | gttatttttt | gttataatta | taaattgaag | 960 |
| aaattgatt | gttttttttt | tttagttaat | atgttgtgtt | tttagtttta | aatatttttg | 1020 |
| aaagtgtgt | tagattttatg | agtaatgttt | ttgtttttta | taggttaaga | tattaggtag | 1080 |
| ttttttgtat | ttttggagtt | tttagttttt | tgtaaaagtga | ggaagttaga | ttaagtaatc | 1140 |
| gttaggtttt | tttttagatc | gattaatttg | atggtattag | atgtaattgt | ttttgaatta | 1200 |
| gggtatgaaa | tgaatttagt | tttgggtgat | taatgtgatg | attttggttt | attaaagtgt | 1260 |
| gagtacgcga | taggttttagt | attattttat | atagagataa | agggttaatt | tttgttttta | 1320 |
| aaggaaatgat | ataatttggt | tttgaagtga | tttatattat | ttttattttt | gaataattta | 1380 |
| atgttttagaa | aataatttta | gaattttcgt | tgatttttagg | gatgtaagat | acggtttttt | 1440 |
| gatagtattt | gggattgttg | aaaaaagtaa | ttgaggaaaag | ggtattttta | taacgtaata | 1500 |
| ttgaatttag | tgtttaaggt | ttattatagg | aatttttaac | gattttttata | attttttttt | 1560 |
| tttttttttt | tttttttttt | tattttgaaa | ataaattgag | aagttagtat | tgggataaatt | 1620 |
| attttttttg | atttaaaataa | aaagtttttg | gtaaaatatag | gtataaattg | ttaaatggaa | 1680 |
| aaagtttttt | tttattttta | gttagagggg | ggttggggat | tttagttttt | tagaagtcgg | 1740 |
| ttcgtggacg | tttagagaat | tttttcggag | attagggttag | ggttattgag | tttgttttagt | 1800 |
| agggcgtcgt | ttcggacgtc | gtttcgtttt | ttattttggt | agcgtcgcgt | tcgggtcgcg | 1860 |
| aagggtcgtg | cggcgttcgg | tgattggcgg | cggtcggag | ttgttcgggt | gttattgggt | 1920 |
| gttcgggttt | ttttgttttc | gggttcgggt | cgtaggttcg | ttgcggcgga | ttgggcggcg | 1980 |
| gaagttcgac | ggcgtcgggc | gagtggttgt | tgagcggcgt | cgcgggagtt | tcgtaggttt | 2040 |
| ttcgtgttcg | tagcggagtc | ggaggttagt | tgaattcggg | cgtgggattt | cggataggag | 2100 |
| gaggagggga | tttataggac | gcgttaatat | ggatttgga | aataaagtga | agaaggtagg | 2160 |
| ggggcgttcg | tggcgggcgg | cggttgtttt | atttgcgcgg | gtcgcgcggc | gcgcggcggg | 2220 |
| cggaggtgtc | gaggtgggtg | gggttcgcgg | gtttttcggg | gtgagttcgg | ttttgggttt | 2280 |
| gcggtgtttc | gggtttaggg | atttggtttt | ttgggtagag | gaggtgttcg | gcggtttcgt | 2340 |

| | | | | | | |
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| tagtttttta | tattcgggag | cgatagaatt | ggaagcgca | gagagggcg | gagcgggatt | 2400 |
| tttttttta | gttttacga | attttagtg | ttgtagggt | tggaaatttt | atttaagatg | 2460 |
| tttagtttt | gtttgtggt | ttttaaaag | aaaggacga | tttagggcg | gtgcgggca | 2520 |
| gatcgtgata | ttttttggt | taggaagtg | aattttatta | agtttttgt | gtttggggt | 2580 |
| ttgtgtgtt | ttgatagtt | tgattttttt | tttttcggt | gggttgttt | gggcgtttta | 2640 |
| aatgagtg | tgatttaat | tattgttttc | gtattcgtg | tggtgataat | ttttaatgt | 2700 |
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| attagcgtt | tagcgtagg | agatatttt | agtttggtg | ttgtttcgta | ggtattggaa | 2880 |
| tcgacggtt | tatttgagtt | attttcggg | tatgcggag | ttggtgtcgt | ttgggagaaa | 2940 |
| aggggtggga | ttagattat | atttagaag | aatgttgat | ttatattcga | gtgaattgt | 3000 |
| ttgtgcgaaa | gtttttttc | ttttagggg | ttgttttat | ttttatttt | tggtaaatt | 3060 |
| aagttagtt | ttttttatta | aatagagaag | ttttgtagag | agaggaagg | aaaaatatag | 3120 |
| aaaatagtt | ttgtttttt | tatatttat | gtttt | | | 3155 |

<210> 297

<211> 3155

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 297

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| taaaattttt | ttatttgata | agggatagtt | agttaaatt | tattataaag | taaaatatga | 120 |
| gtaaattttt | tggaaacgag | agaattttcg | tatagggtta | tttattcgaa | tgtgatatta | 180 |
| gtattttttt | tgagttatag | tttggttttt | atttttttt | tttaggcgat | attaggtttc | 240 |
| gtataattcg | ggagtggttt | aggtagggtc | gtcggtttta | gtgtttgcga | ggtagtagtt | 300 |
| aagttgaaaa | tgtttttttg | cgttgagacg | ttggtgataa | tcgttttttg | ggattatttg | 360 |
| ttaaataaag | agaatgcgtt | ttttgataga | taatttttta | agagggaggt | attgtttcgg | 420 |
| tcggtagata | agtaatgaat | gatcgaaaaa | aaaattatat | tagaagtatt | tattagtagc | 480 |
| ggtgcgaagg | tagtgtatta | aattaatatt | tattttagag | cgttttagat | agtttagtcg | 540 |
| gaagggagga | gattagagtt | gttaaagtat | agtagagttt | taaattataa | aggtttaatg | 600 |
| aaatttaatt | ttttgagtta | ggaagtgtta | cggtttcggt | cgtattcgtt | ttaagttcgt | 660 |
| ttttttttt | tgaggaggta | taggtagagt | tgaaatattt | taagtaaagt | ttttaatatt | 720 |
| tataattatt | gggatttcgt | gagattggag | agaagagttt | cgcgttcgtt | ttcgttcgcg | 780 |
| tttttaattt | tgctcgtttc | gagtggtggg | agttggcggt | gtcgtcgagt | atttttttta | 840 |
| tttagggggt | taggtttttg | ggttcggggt | atcgtagatt | tagagtcggg | tttatatcgg | 900 |
| gggttcgcg | agttttattt | atttcggtat | tttcggtcgt | cgcgcgtcgc | gcgattcgcg | 960 |
| ggtgaagt | agtcgtcgtt | cgttacgagc | gtttttttat | tttttttatt | ttgtttttta | 1020 |
| gtttatgtt | aacgcgtttt | atgggttttt | ttttttttt | attcgggatt | ttacggtcgg | 1080 |
| gttttagttg | ttttcggttt | cgttcgcgaat | acgggaaatt | tgccggaatt | tcgcggcgct | 1140 |
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| ggtgagaggg | ggggcggcgt | tcgagggcgc | gttttggttg | gtaagtttag | tgattttgat | 1380 |
| ttgggttttc | aagggatttt | ttgggcgttt | acgggtcggg | ttttaaagag | ttgggatttt | 1440 |
| tagttttttt | ttagttgaag | atggagaaga | atttttttta | tttggttaatt | tgtatttgtg | 1500 |
| ttgttttagg | attttttatt | tggtttaagg | ggaatagtta | ttttaatatt | aatttttttag | 1560 |
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| tttaattggt | tttttttata | attttaaaata | ttgttaagaa | atcgtatttt | atatttttaa | 1740 |
| agttagcgaa | gattttttaga | ttgttttttg | agtattgggt | tgtttaaaag | ttaagatgat | 1800 |
| gtgaattatt | ttagaaatag | gttgtgttat | ttttttggaa | gtagagggtt | gttttttggt | 1860 |
| tttggtgtg | atgggtgttag | gtttatcgcg | tgtttaggtt | ttgatgaagt | agagttatta | 1920 |
| tattggtgta | ttaaagttga | atttattttt | tgttttaatt | taggagtaat | tgtatttaatt | 1980 |
| attattagat | tggtcgggtt | ggaagggtgt | ttaacgatta | tttagtttag | tttttttatt | 2040 |
| ttgtagggaa | ttgaggattt | tagaggtgta | gggatttggt | taatgtttta | gtttgttggg | 2100 |
| gatagaggta | ttgttttatga | attttaaata | ttttttaaag | atgtttgggg | ttggaagtat | 2160 |
| agtatgttga | ttaaggaaa | agagtagtta | atttttttta | atgtgtgggt | atggtaaaaa | 2220 |
| ataatattgt | ttagatagta | ggtgatttaa | tttggtattt | attttttaaa | ataataaaat | 2280 |

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<212> DNA

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<220>

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| agggtgtaaa | aatcgtcgat | gggtagaggt | gaagatgttt | tttcggatt | gtatttttcg | 180 |
| gtgttttga | attagagttt | agttgtggga | tttgttgaag | aaatttgatt | tttttgtttc | 240 |
| ggcgagattt | taaaaattag | aaatagaaat | tttttagagt | agagaggaaa | tataattaaa | 300 |
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| aggatattta | tttattaaga | ggggattttt | ttttagagtt | gtcgtaaaag | tgttttagagg | 240 |
| ttagaggatt | ataaagttat | agtgtgttg | ggaggttggt | gatttatttt | taagaatttc | 300 |
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| aattttggaa | ttggttaatt | tttatgattg | atatttttga | gttttttatt | tttttttatt | 540 |
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| gtttttttta | tagg | | | | | 19634 |

<211> 19634

<213> Artificial Sequence

<223> chemically treated genomic DNA (Homo sapiens)

| | | | | | | |
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| gaaataaatg | tagattggta | aaattgtaaa | aaaaaatatg | gataaataaa | aatgagagag | 120 |
| agagagagaa | tagtttttta | gaatgaggta | tgggtaatgt | ggtttaggac | gttagttgaa | 180 |
| ttattgttaag | tataaaaaaa | gaaaatatat | tgtagtgggt | tgagggttat | ggagtgtaga | 240 |
| atatttagga | ttggaaggat | ttataaagat | tagttagttt | aatttttttt | tattatagat | 300 |
| tagaatttag | atataattaaa | aattttattt | attacgaaaa | tgtttgttat | taggagattt | 360 |
| tgataaggag | ttagggtagt | gtagaaattt | ttatttttat | tgttgattag | gatgtttatg | 420 |
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| aggttaaaaat | taaaaaggaa | ataaatttta | aataggtttag | agattttttt | tttttttatgt | 660 |
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| gataaaaat | gagattaaaa | gaaaattttt | tgggtggatg | gaatgttttg | gtttatat | 1980 |
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<212> DNA

<213> Artificial Sequence

<220>

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| tggggtgggt | tttttttggg | gaagggtggg | atgtatggag | ttttgtttta | tagatgggat | 180 |
| gggggtaaaa | ggagaggttg | ttggtggaga | ttagttaat | tttgggttat | aaataaatat | 240 |
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| aaagtgtgtt | attgggaatt | acgttttttg | gaaaggaagg | agagataacg | gtcggtttat | 240 |
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<220>

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| ttagagttaa | tggttggttag | gatatgatta | gggtgagtag | gtagtgggga | ttattttgat | 240 |
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<212> DNA

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<220>

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<211> 4394

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 311

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<210> 312

<211> 4857

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<220>

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<400> 312

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| atttgttttag | ggaatttttt | ttggattatt | tattttaaat | agtttatatt | ttatttgtat | 240 |
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| aaagattaga | taatatatat | ttgtttttta | ttgttaatat | aataaaagggt | gggaattttg | 360 |
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| gtagatgtta | aaggaatgtg | ttgagttttt | tatttcggtt | agtagttatt | ttaggtattg | 480 |
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| tttttagtatt | ttattttatt | taaaaaaaaa | aaaaatttgg | ttaggtgtag | tggtttatgt | 600 |
| ttgtaatttt | agtatttttg | aaggataagg | taggtggatt | atttgaggtt | aggagttcga | 660 |
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| tgtgttggcg | tgttttttgta | atttttagtta | tttaggaggt | tgaggttaga | gaattgtatg | 780 |
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| tagagtgaga | tttcgtttta | ataaataaat | aaataaataa | taaaaagaaa | gaaaaaattt | 900 |
| attataagtt | tttttaaat | tatagaaaag | gagatagaat | ggtataatat | gtttttatat | 960 |
| attgattatt | tttatataat | tgataaatt | atttggttat | tttggtttta | ttttttattt | 1020 |
| aagtatttat | ttatttatta | tttttttgag | ataggttttc | gttttgttgt | ttaggttga | 1080 |
| gtgtagtggt | gtaattatag | tttattgtag | tttttagttt | ttaggtttta | gcggtttttt | 1140 |

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| aaaataaaag | aaaaagaaaa | aataaaaataa | aaatttttta | aataataata | ataaaaaatg | 1440 |
| tagatattaa | taatatattat | tattaaatat | tttagtaagt | atttgtaaaa | ataaataaat | 1500 |
| aaataaaaaat | tagaatttta | tttaagtata | tagttattgt | cgtaatagtg | atattttattt | 1560 |
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| cggttaattt | ttgtattttt | agtagagacg | gggtttttatt | attaagtgtt | ttaatgtagg | 1800 |
| tgtaagtgtt | ggaatagttg | ttgggttaaaa | tggagggttt | aatataatttt | tttaataattt | 1860 |
| atlaaggatt | tatttcctgt | tgggtattgg | tttaggagtt | gggggtatag | cggaagtaa | 1920 |
| agtaagggtt | aagtgtttta | agtgtttaag | agatgtatat | tttaggatgt | attttttagat | 1980 |
| aaggatattt | tttaaaatat | tagtattttt | tttgataaaa | ttataaaaa | ttttgttagt | 2040 |
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<211> 5425

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 314

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| tggaataga | ggattaaatg | gatgtgtgt | ttttttttt | aatttattat | atgggattgt | 420 |
| gtatagtttt | ggtgttagga | attaatttta | ggaaggatga | aggttgattt | tttagatttt | 480 |
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| gatagggaaa | atattttttat | attaaaagaa | attaggttaa | attatggtag | agaatgtaaa | 900 |
| atttatagtt | taaaaatgat | gaaatttttag | attttaaagg | aatttttttt | ttgtagggta | 960 |
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| gtaatttcgc | gcgttttttg | tattgattaa | aaatgggggt | tgaaatagta | aacgcgagga | 1800 |
| ggagtaattg | tttcgattcg | gtttagaagc | gcgattaatg | gggatgtgag | ttttttcgcg | 1860 |
| cgaattaatt | agcgtagggt | ttgcgatagt | acgggttaat | ggggcgtcga | ttcggcgtag | 1920 |
| gaataaaggc | ggggttcggg | gtcgggttga | gattttttatc | gtacgggtta | ggaacgttag | 1980 |
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| gaaggagatt | ggttgtgggt | ggggatggaa | gtttggggat | tttattgtag | attttttttt | 5340 |
| gttttttcgt | taggtttgta | tgttttagagg | gaaagtagtg | tagaatatat | ttaaataatt | 5400 |
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<211> 5425

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 315

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| tatatataag | gtaagtatga | aattaggtaa | tgtgattgat | gttgatata | tttttttaaa | 240 |
| ggttcgaatt | tatcgatttt | ttagaaaaatg | ttttttttat | aaattttatt | tattattttt | 300 |
| ttaaagttaa | agtaagaat | gtataaagtt | ttgggttaaa | gggataacga | taaaaaatt | 360 |
| tgtttagat | tatataggta | atttaatttt | tcgatttttt | ttggtttaag | gtgttagatt | 420 |
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| gggggtttga | gtttttttag | gattaaagaa | cggaggtggt | taaggacgta | gggaggagcg | 4140 |
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<220>

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| attttaagga | gaattttaat | agggatggag | attttaaatat | aatttggttg | tatatatata | 180 |
| gagtatttgt | agaaatataa | gtaagaaatt | ggaaatattg | tttttgagta | gaataattga | 240 |
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| ttggaagtcg | aggtgggtgg | attatttgag | gttaggggtt | aaattagttt | ggttaatatg | 780 |
| gtgaaatttt | tggttttatt | aaaaatataa | aaattagtta | ggtattatgg | cgtatatttg | 840 |
| tagtttttagt | tattcggagg | ttgaggtagg | agaagtgttt | gaattcggga | ggtgtagatt | 900 |
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| tttgaaaaat | ggtttttaaat | aaaaatgatt | taagggttga | aataagataa | gattaaattg | 1860 |
| tcgttatggt | aaaaattgac | gttatggtaa | ttatattaag | tattttttta | ttattggatg | 1920 |
| gaattttttg | ttgatttttag | ggtttagatg | taggtggaaa | tattttgttg | gtataaaagt | 1980 |
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| ggttttggag | ggcggtagag | gttttgagga | tgttttatta | ttagtaataa | tgggtggtgg | 2340 |
| gttaaattat | aggttggatt | agaagttagg | ttgagaaggg | gaagttaggt | tgggggacgt | 2400 |
| tttggggaag | gatatttata | tatggtatga | aggattggat | tttttaaagg | ttaagggaaga | 2460 |
| gtagggttaag | ggtttggagg | tggagtggga | tttggtagtg | ggtatgtaag | tttattgggt | 2520 |
| aatatatgtt | atggagtata | aagttttttt | tgttgatatt | agaaggaaa | gttttgggaa | 2580 |
| tggaagatga | gttagttttg | agtgtcgttt | aaattacgaa | atcgaggatg | aagggggtgt | 2640 |
| gtgatttcgg | tttaaatatt | ttgtattgtg | ggtttttcgg | ttttatttgt | tatcggtatg | 2700 |
| tttattattt | tgggaatggg | atgttaattg | gggttttttc | gtaatttttg | tgatttttgt | 2760 |
| aggttatat | ttgggtgacg | tattttaaatt | gagttttttt | attatagaag | gtgtgatttt | 2820 |
| tatttttcgt | ttaggattag | gaggttgggt | tttttttttt | tatttgttta | tttttggtag | 2880 |
| tttcgggggt | cgttttaagg | ttaaatagga | ttaggatttg | tagtttgggg | tgatttttgt | 2940 |
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<210> 319

<211> 2972

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 319

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| agttttattt | gaatttttga | cgatttttcg | ggttattagg | agttagtagg | tgggaaggagg | 120 |
| agatttagtt | ttttgatttt | ggggcggggg | tgggggttat | attttttgtg | atggagggaat | 180 |
| ttagtttgga | tgcgttattt | aggtatgatt | ttgtaagagt | tattaaaatt | gtcgaagagg | 240 |
| tttagtttag | attttatttt | tagatgatgg | tttatgtcgg | tgagttagtg | ggttcgaggga | 300 |
| tttatagtgt | aaaagggttt | aatcgggtta | ttgtattttt | tttatttttc | atttcgtgat | 360 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ttaaacggta | tttaggatta | atattttttt | tattttttaag | gttttttttt | ttgggtgtag | 420 |
| tagaagggat | tttgtatttt | ataatatatg | ttgtttaatg | ggtttgtatg | tttattgtta | 480 |
| agtttagttt | tatttttagg | tttttgtttt | attttttttt | ggtttttgga | aaatttagtt | 540 |
| ttttatgtta | tgtataaatg | ttttttttta | ggacgttttt | taaatttggt | tttttttttt | 600 |
| agtttggttt | ttgatttagt | ttgtgggtta | atttattatt | tatgtttggt | ggtgggtggg | 660 |
| tatttttagg | atttttgtcg | tttttttagga | tttttttttt | tatttggtcg | aagtagtatg | 720 |
| gtgtgttttg | gaagttttata | tgtagtaagg | ttgttttagtt | cgggtagtgg | taggggattt | 780 |
| ggcgggtagc | gtgtagttta | gcgttggtgt | cgggtgatta | ggtttattag | gagtaggaag | 840 |
| atgggtatta | ttatggtttag | gggtattagt | gttttttagtt | ttatggttgt | tttattatta | 900 |
| attgggtttt | tttggtatata | tttggtattt | ttattttatt | aggtatagag | gattaggtag | 960 |
| gatatttttcg | gtatatcgag | cgcgtgattt | tttttttata | aagggtgttg | atgatggttt | 1020 |
| tcgttttttg | ttgtgagtga | atttgttggt | ttgattgtgt | tgtagtggtt | agagttaggt | 1080 |
| tagggtaggt | atgggttggt | tttagaggtt | ttgtcggtgt | tttttgtttt | aggtttttat | 1140 |
| ttagggtagg | gtggtagaaa | gggttggtcg | gagaagttat | tttttttttt | tattttaagt | 1200 |
| tttttaagtt | tatataggtt | tttgggataa | ttagggtttt | agtggattcg | gttattttatt | 1260 |
| tttttagttag | gtttatataf | tttaatgtag | ttataatttt | tttttttagaa | tatgattttg | 1320 |
| tttttttttt | atttttattt | gtttattttta | gagtgttttt | tagtattttt | atttgttatt | 1380 |
| ggtattttatt | tggtgtttta | gagtttttga | tgatgagtgg | tattatgggt | ttgggttttt | 1440 |
| tattttatttt | tgtatttttg | ataigtatag | acgttatgta | tatatgtgat | ggtgtataga | 1500 |
| tttttggttt | attttttagat | atttgtttat | ttgtttatata | ttgtagggat | acgattatat | 1560 |
| atgtagaaaa | ttattttatat | aaagataata | tttatatata | tatagattta | tattgatatt | 1620 |
| aggggtatat | attttttttt | atatatatta | gttatatata | tatatagatt | cgggtattaag | 1680 |
| tattttatttt | tttagttatg | ttcgagggtt | tttggatggg | attttttttg | tttagagggt | 1740 |
| gttttcggtg | agttttaaag | ttgtttatag | gatttttagtt | tagttttatat | tttgggtttt | 1800 |
| ggtcgggtta | gtattttttg | tttgaatag | gggtgttttt | agagttttta | gttggttagtt | 1860 |
| tgaaggtttt | tgtttttagtt | tgtgatagta | tttttttaggg | ttgtttgagg | gtcgttattt | 1920 |
| tttattgttt | tttggttttt | atgtttttga | tttagaaattt | ggtggaaata | ttatggagga | 1980 |
| ttttttatttt | aggatatggt | gtttttttat | ttttattttt | tttttagata | gggtttttatt | 2040 |
| ttgttggtcg | ggtcggagtg | tagtggttagg | attatgggtt | attgtaattt | taatattaag | 2100 |
| tggatttttt | gttttttaag | tagttgggat | tataggtatt | atcgagttta | aataattttt | 2160 |
| tttttgagac | ggagttttgt | tttgtcggtt | aggtgggagt | gtaatgatgc | gatttcggtt | 2220 |
| tattgtaatt | tttattttta | gggttttaagc | gattttttttg | tttttagtttt | ttaagtagtt | 2280 |
| gggtattatag | gtgttttatt | ttatgttttg | ttgatttttt | gtataagaag | tttatagaat | 2340 |
| attaagtaga | tttaatttaa | agaagacgat | tttaaggat | ttgataatta | aatttcgaaa | 2400 |
| ggttaaggat | aaagaaagga | ttttaaaagt | agtaagagaa | aagaaataaa | taatatgtag | 2460 |
| tagagtttta | atatatgata | tggggtagtt | attttttttag | tggaaatttt | atagggttagg | 2520 |
| ggggagtggg | atgatatatt | taaagtgttg | aaggaaaaaa | aatttttagt | ttagaataac | 2580 |
| gtatttggtta | aaaaatatttt | tttaatagga | aggagaaata | aagatttttt | tagataaata | 2640 |
| aaagttgcga | gatttttatta | atatttagatt | tatattttat | aagaaatggt | aaagggtatt | 2700 |
| ttttaatttg | aaaaaaaaaa | ggatattaat | gagtaagaag | aaattatttt | aagggtataaa | 2760 |
| ttttattggt | aatagtaagt | atatagaaaa | atagagtatt | ataatattgt | aattgtggtg | 2820 |
| tttaatttat | ttttatttta | attagattaa | atgatgaatt | aattaaaaat | aataagtatt | 2880 |
| tttaagata | gatagtatag | taagatataa | agaggtcgga | ttcgggtggt | tacgtaggta | 2940 |
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<210> 320

<211> 6101

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 320

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| tgtgttttagt | aaagtatttt | aaaggagata | gaaatgtatt | taaatttttt | ggatttttat | 120 |
| tttatttttt | ttggggattg | ttattatttt | tttatgtttg | tttttttttg | tttgatgttt | 180 |
| gttggtatttt | tttttttttag | gtgttttttt | gtacggtttt | tttatttttag | ggatttttaga | 240 |
| gttatagtat | atgtatatta | ttattttaagt | atgtttattt | gttttttggt | ttattaggtt | 300 |
| gtttttaagg | aatatgtggt | tttcgggtata | tatttggtat | aatatgtgat | atgatattta | 360 |
| tttatttggt | tttgaatttg | ataaggaatt | tggtatgatg | tttattttatt | taggttaggt | 420 |
| gtcagtagt | tttggagggt | taggggttag | agggatggga | aaagggtgtt | ttttgggggt | 480 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| agtattagtt | ttttagtagg | gggtgaatgt | gagaaagaat | aaagagagaa | ggaagcgaat | 540 |
| aagtatagtt | taaatatcgt | ttatttttat | tgagttttta | gaacgttggt | attttgtttg | 600 |
| ttatgtaatt | tattttattag | gttaggtaga | tatagaattt | gggtgtgagt | gacgataatg | 660 |
| agttgatata | atttttatat | ttttattatt | gagatttttt | ttattaggaa | tgggttaggg | 720 |
| agtttatagg | tggtagtaat | tgttattata | ggtttttatt | ttattagttt | ttggggtttg | 780 |
| tttttttttt | attagaaaat | tttttatttg | ttaaaaagga | agttatttgt | tttgaatttt | 840 |
| aatttttatt | ttaagaggtt | gggattattt | tattggagtt | tttgatgttg | tgtgatttgt | 900 |
| agtgtatttt | gtttttattt | tggtggttga | gggtggttgg | gtttatttgg | ttatttgggt | 960 |
| agttgttttt | tttttttttt | ttttttttgt | ttttagatat | gtagtatttt | tagagagaa | 1020 |
| gggttatttt | ttggttaaaga | atttgtttta | tttgtttatt | atggtaggat | ttttgaagg | 1080 |
| tttataggaa | gtagtataaa | ttgatattat | tttattaagt | tattagtttt | attttattta | 1140 |
| tgttttgttt | tttttttagg | ggtttttttg | ttaatagaat | tatagaggat | tagtttgaaa | 1200 |
| gtgtagagat | agtagttgag | gtatagttta | gagttttggt | tgtattaatg | atttaagaag | 1260 |
| ttattagaaa | gttagaagg | atgatatgta | gaggttttagt | aatttttagtt | aagttaat | 1320 |
| tattagtttt | tttagttggt | tattgtgtgt | atagtatttt | ggtagggatt | agagttatga | 1380 |
| tagggaataa | gattagatta | tgtttttagg | gagttttatt | ttgtttagg | aaataggcgt | 1440 |
| ggaaatataa | tggtggtaaa | gaggaaagag | gataatagga | ttgtatgaag | gggatggaaa | 1500 |
| gtgtttagg | gaggaaatgg | ttatatttgt | gtgaggagtt | tggtgaggaa | agatttttaag | 1560 |
| agaaggtttt | gtttgtttgg | gtttggaagg | atgtgtagga | gttttttagg | gggtataggt | 1620 |
| atatttttag | tataggtaaa | gatttgtagg | tgtggtttgt | tgggatgaat | tttaagtatt | 1680 |
| ttggaatgag | gatagttata | gagataaggg | taggagagag | gcgatttaat | agattttatg | 1740 |
| taatggttt | tatttgagtt | tttgataaga | atttagaatt | tttggatttt | ttagtaatat | 1800 |
| gattgagtt | gtttatgata | ttttatagaa | tatgaattta | aaggaggtta | gtgagtgggt | 1860 |
| tgtgtgtgat | ttttgtttta | tttttaaggt | ggagaagttt | tttttaattg | taggtagagt | 1920 |
| ataggtgggt | ttgttattgg | ttgtagtttt | agttttgttt | tttttttttag | tatataaata | 1980 |
| atttaatagt | tttattgaat | tattgttgtg | tagggtagga | aagttttatg | tatatagttt | 2040 |
| agtaaagagt | aatatagagt | tgaaaggaag | attttagagga | gagagataag | taaggaaagt | 2100 |
| agtgtgggt | tttatttttag | atttgggttat | ggaaatttgg | ttttttttgg | ttgttagttt | 2160 |
| ggtgtttttt | tatttgtgag | taattgttta | gggttttttt | ttttgttttt | ttggatttgg | 2220 |
| ggtgttaatt | aggttttttt | tttttttatt | tgttttgaag | attaaaaaag | atgttttaggt | 2280 |
| cgggcgtggt | ggtttatatt | tgtaaatttt | gtattttggg | aggttaaggt | aagtggattg | 2340 |
| tttgaggtta | ggagtttaag | attagtttgg | ttaatatggt | gaaattttgt | ttttattaaa | 2400 |
| aatataaaaa | ttagtgggt | atggtgggtg | acgtttgtat | tttttagttat | ttgggaggtt | 2460 |
| gaggtaggag | aattgtttga | attcggtagg | cggaggttgt | agttagttga | gatttatgta | 2520 |
| gtgtatttta | gtttgggtga | tagagttagg | ttgttttaaa | aaaaaaaata | aaaaaaaag | 2580 |
| atgtttaagg | agtagtagtt | taagtgttgg | atgttataaa | tatatagagg | ttattgtaga | 2640 |
| ttttatgtag | ttttataaag | gaataaataa | gtattttttt | tatttatttt | tagtggtaag | 2700 |
| aagggttttg | ggatagtatt | gattgaggat | gatttatttt | ataatagttt | ggatttaagg | 2760 |
| aggataagga | aggaaagtag | tgacggattt | tatttttaaa | ttggttgtgg | aaatttgggt | 2820 |
| tttttttatt | aaattagaat | ttggatttta | tatttttttt | tttatgttgt | agtagaagag | 2880 |
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| ttttattgtg | ggtagtggag | gttttttata | tgttatat | tattttttatt | ttaattttat | 3000 |
| ttttattaag | atttgggaat | tataatgata | ggaaaataga | aaatataaat | tttattttta | 3060 |
| tttttttata | gaaagggttag | aaatttagtg | agttgtggtg | atatattttt | tattttttga | 3120 |
| ttttttaata | ttaattgata | tggttttaaa | ttatttttatt | ttaaattaga | tttttttgga | 3180 |
| gatagtttat | ttttaaatatg | tttttttttag | gtgataaatg | aggttgtgta | gttttagtatt | 3240 |
| tgttataata | aatgtgtgta | aaataatttt | attttttttag | aattatgtta | ggaatatgaa | 3300 |
| tttaatgtat | aaatgtataa | ttttatgata | agattgtata | tattttttta | aataatatttt | 3360 |
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| gttttaggta | gaggagtaag | taagattgtg | agttagtgt | gatagtataa | gtatttaggt | 3480 |
| aggattaaaa | tggagtaaga | aaatattttt | tatttttttag | ggtagaattt | ttaaagagata | 3540 |
| tttatgggtt | ttgggttcgt | agtggaggtt | attttaagga | taaatagtgt | tgtattttat | 3600 |
| ttgtttgaag | tttggtatata | gaggtattat | ttgtgttatt | ttgtgtgtgg | ttgttatgt | 3660 |
| tgtgggtggt | ttattataga | tttaggtagt | tgggtagata | atatttttagt | tttagatgat | 3720 |
| gttgatgtag | tttaggagtt | agaaattgta | gtgtagataa | tgtttttttt | aggttaatat | 3780 |
| aattaagtgt | aatagatgat | tggttttttt | gttagttttt | ttattggaat | taaaagtagt | 3840 |
| attatttttat | taaatagagg | ggagttggaa | agaaattata | tagtttgttt | agtttagttt | 3900 |
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| atgttggtga | tatattaatt | taatagtttt | ttttggtttg | agaggttatg | taattttagt | 4020 |
| aaagtttaga | agtagagatt | agtgttattt | atttgttatt | gttgtgataa | taaaggaagg | 4080 |
| aataggagtg | ggaaaattta | aggttatttt | ggtttttgga | gatggtgtat | acgtttttat | 4140 |
| taattgtttt | ggggtaaaga | tttaaatgta | ttattgggtt | tgggttatgt | gtttttgttg | 4200 |
| ggttttttta | atatgagttt | ttacgttatt | tttttagttg | attttattat | atattattat | 4260 |

| | | | | | | |
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| agttatcgga | tttgtataga | atatttggaa | tttatattgt | tttaagggtt | atTTTTTaaa | 4320 |
| gaagagaaaa | taagggttta | atttaattgt | ttggaatatt | ttatgtttat | ttatgtggaa | 4380 |
| tatttatattt | tttgttataa | ataggaggga | atgtggatat | tcgaagggtt | ttatTTTTTta | 4440 |
| gttaaaagtt | tatatgaagt | atatggattt | atTTtatatat | attatgtttt | ttagttatat | 4500 |
| TTTTTTaatt | tgtTTTTttg | gggttaattt | tgtgggatta | gtagatttat | ggttgagttg | 4560 |
| aaggatggtg | atTTTTTTta | ttagtttttt | TTTTTTTTtt | agTTTTTTaa | TTTTtagtaa | 4620 |
| tattagattg | ggaaggTTTT | tagatattta | gaaattttag | ttcggggagt | ttatatatga | 4680 |
| tttattaaag | atgagttgta | agtaggtttg | TTTTaggag | tattagtttt | aatgggtttt | 4740 |
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| gagaaaaatt | agtatgtttg | gttatgttag | TTTTTTTTtg | tattgttata | aagaaatatt | 4860 |
| agagtttggg | tatttataaa | gaaaagggat | ttaattgttt | tatggttttg | taggttgat | 4920 |
| agaaagtata | gtgatttttt | TTTTtaggga | ggtttttaga | aatttataat | tatggtagaa | 4980 |
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| aagggtttat | atattttaa | tattagattt | tataaaaaatt | tattgttacg | aggataatat | 5100 |
| tttaaggcggg | atggtgtgaa | acgatgagaa | attgttttta | ggatttaatt | atTTTTtatt | 5160 |
| aggttttatt | tttagtattg | gggattgtat | tttaatatga | gattttggta | ggggatataga | 5220 |
| tttagattat | attattggta | ttgtgttaat | tagatgaata | ttattagttg | gaaggttaga | 5280 |
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| gttatttagg | gaaatgatag | tttaattatt | TTTTtaatat | gttaaattaa | ttagattatt | 5400 |
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| gaaagtataa | aagtttttga | gtaaatTTta | aagatagggt | tattataggt | TTTTagtgat | 5640 |
| TTTTtgtgat | tgagtggttg | tagtgatgta | aaattttatt | attattgagg | aagataaaaa | 5700 |
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| tatatttgag | aatatttatt | aaatatTTat | tttaggattg | ggattatgaa | gatttttagtt | 5880 |
| gttttgagtt | aattattgta | atTTTTtggt | gttttatggt | ggaggtagga | aaggatttga | 5940 |
| tgaataaata | taattattgt | cgttagagtt | attgttatta | TTTTttggtt | taatgttatt | 6000 |
| tcgtTTTTtt | gagtatttta | gttttttagt | taatgattta | TTaaTTTTta | tatttataaa | 6060 |
| gttataatcg | ttgtgatttg | atTTTTgttt | tattttgtag | a | | 6101 |

<210> 321

<211> 6101

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 321

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| atgagttatt | gattgaggaa | ttggaatggt | taagagaacg | aggtaatatt | aaggtaagaa | 120 |
| ataataatag | taattttgac | ggtaatgatt | atatttggtt | attaggtttt | TTTTtgtttt | 180 |
| tattatgaga | tattaaaaag | ttataatgat | tagtttaaag | tagttgaagt | ttttatgggt | 240 |
| ttagtttttg | aatgaatatt | tgataaatgt | TTTTaaatgt | gaatgatttt | gagaggTTta | 300 |
| ggttaggaatt | TTTTtaggtt | atTTtgtttt | tttacgttta | tttagtaagt | ggTTTTTTTT | 360 |
| ttaaatttggg | gatttttatt | ttaggtagaa | agggtgatat | TTTTttgttt | ttcgtagtga | 420 |
| tgatgagatt | ttgtattatt | gtagttattt | agttatagag | ggttattgag | agTTtatggt | 480 |
| gatttttggtt | ttagaatttg | tttagagggt | tttatgtttt | TTTTTTTTtt | taagttttga | 540 |
| TTTTtgtttt | ggatttggtt | TTTTtaaat | cgttatttat | agagagggtt | tggaggaggt | 600 |
| atagagtttt | tatttttata | gattgataat | tgtgtttaag | gtttttattg | atTTtataga | 660 |
| aatgtgagta | gttttttagt | atatttttagt | ttttgtgatt | agatgatttg | gttgatttga | 720 |
| tttattggga | aggatgattg | atTTtatattt | ttttgaatga | tagtgtgtag | aagaattata | 780 |
| attaaagaat | taatttttag | gttatttttt | TTTTtggtga | atttagtttt | tttaattggtg | 840 |
| atattttatt | gattagttata | gtgttagtga | tatggtttga | atttgtgttt | ttattaaaa | 900 |
| tttatgttga | aatgtaattt | ttaatattgg | aggtgggggt | tggtaggaga | tgattggatt | 960 |
| ttaggggtag | TTTTttatcg | TTTTtatatta | tttcgtttta | ggtgttggtt | tcgtgataat | 1020 |
| gagtttttat | gagatttggt | ggtttgaaatg | tgtgggtattt | TTTTtttagt | TTTTtttgtt | 1080 |
| tttgttttag | ttatgtaaga | tttgtttggt | TTTTttttat | TTTTtgttat | gattgtaaat | 1140 |
| TTTTtgagat | TTTTtttagag | gaagaagtta | ttatgttttt | tgtagatttt | gtagaattat | 1200 |
| gagataatta | aatTTTTttt | TTTTtataaat | atttagattt | tggtattttt | ttataataat | 1260 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gtaagaaaaag | attaatatag | ttagatatgt | taattttttt | taaggtgggt | aattataaag | 1320 |
| tagttagttt | attgtatttg | tttattaatt | atattttgtag | gaaaatttat | taaggttggt | 1380 |
| gttttttaag | gtaggtttgt | ttgtaattta | tttttgatgg | gttatgtatg | aatttttcga | 1440 |
| attgggggtt | ttggatgttt | gaagattttt | ttagtttgat | gttattgagg | gttggaagat | 1500 |
| tggaggaaga | agaaaagtgt | atggaagagg | ttattatttt | ttaatttaat | tatgaatttg | 1560 |
| ttagttttat | aagggttggt | ttagagaggt | aaattaggaa | aatgtagttg | aaaagtatgg | 1620 |
| tgtgtataaa | tggatttata | tgttttatat | gggttttttag | ttaaaaggta | gggtttttcg | 1680 |
| aatgtttata | tttttttttg | tttataataa | aagatgtagt | atattatata | agtaaataata | 1740 |
| aaatgtttta | gatagttaa | ttaaaatttt | gttttttttt | ttttaaagg | tagtttttaa | 1800 |
| gatagttag | gttttaaaata | ttttgtataa | attcgggtgat | tgtgataata | tgtggtaaaa | 1860 |
| tataattgag | aaatggcgtg | gagggtttatg | tttgggggat | ttagtagaag | tagtatagtt | 1920 |
| aggtttaata | gtgtatttgg | atttttgttt | tagaataagtt | agtggaaagcg | tgtgtattat | 1980 |
| ttattaaaaat | taggggtgggt | ttgggttttt | ttatttttgt | tttttttttt | gttggtatag | 2040 |
| ttatggtaaa | taaatgatata | taatttttgt | ttttaaattt | tttataagtt | atatgatttt | 2100 |
| ttaggttagg | ataaattatt | gagttaatgt | gttagtagta | ttgggtttta | aggaatgatt | 2160 |
| taggtgaatg | tttagattta | tatggtttcg | tgttaaggta | gaggttaggt | tgggtaaaatt | 2220 |
| gtgtagtttt | tttttagttt | ttttttgttt | ggtagagtaa | tgttgttttt | ggttttaatg | 2280 |
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| attgtttgta | ttatagtttt | tgtattttgg | gttgatttag | tattatttaa | ggttaaggta | 2400 |
| ttgtttgttt | agttgtttga | gtttgtagt | attattttat | aatatggtag | attatataata | 2460 |
| gagtgatata | gatgggtgtt | ttgtgtttag | gttttaagta | gatgagatgt | aaatatgttt | 2520 |
| tttttttgag | tgatttttat | tacgggggtta | ggatttatga | atattttttt | ggagttttat | 2580 |
| ttgagggat | gaggaatatt | tttttatttt | attttgattt | tatttggtatg | ttttgttgt | 2640 |
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| gtaggtttgt | ttgaaatagg | ggatttaaaa | tgaacgttgg | gaaggatat | tttaaaagat | 2760 |
| atatgtaatt | ttgttataga | gttatataatt | tgtgtattag | atttatattt | ttgatatgat | 2820 |
| tttggaaggg | tgagggttatt | ttatatataat | ttattgtaat | aaatattgaa | ttaatagttt | 2880 |
| ttattttgta | tttagaagga | atatgttggg | aatagattat | ttttaaaaaa | atttgggtta | 2940 |
| aaatagaatg | aatttaagtt | atatttaatta | gtgttaaaaag | gttagaagat | ggaaaatatg | 3000 |
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| ttttattttt | ttgttattat | gatttttaaa | tttttagtaag | agtgaatttg | aggtagaagt | 3120 |
| gaaatgtgat | atgtgagaag | tttttattat | ttatagtggg | gagtgttttt | tttttttatt | 3180 |
| tgttttagga | tggttaggatt | ttattagtga | gaggatttat | ttttttttat | tgtaatataa | 3240 |
| aggggaaaaat | gtaaaattta | aatttttagtt | tagtaaggag | aagttagggt | tttatagtta | 3300 |
| agtttggaat | gagattcgtt | attatttttt | ttttttattt | tttttggtt | ttaaattattg | 3360 |
| ttaagtagat | taatttttaat | taatgttatt | ttaaaatttt | ttttgttatt | aaagatggat | 3420 |
| ggggaagatg | tttattttatt | tttttataga | gttgataaag | atttataata | atttttatat | 3480 |
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| tgtaattttc | gtttgtcggg | tttaagtaat | ttttttgttt | tagtttttta | agttagttggg | 3660 |
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| tttaaagtg | ttgggatatt | aggtgttaagt | tattacgttc | ggtttgaata | ttttttttga | 3840 |
| tttttaaaat | agataaggga | aagagagggt | tgattagtat | tttaagtta | aggaaataga | 3900 |
| gaagaggagt | ttggatagtt | atttatagat | agaggagtat | taggttgata | gttaggagaa | 3960 |
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| gggttttggg | tttttattag | aaatttaagt | ggagttattg | gtataaaatt | tattaaatcg | 4380 |
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| aataagttat | atttatagat | ttttatttat | gtttggagtgt | tgttttgtgt | ttttagaaga | 4500 |
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| aaattttttt | tatagatgta | attatttttt | tttttgggt | ttttttattt | tttttatgta | 4620 |
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| gaggtgagtt | ttttaagggt | atagtttagt | tttatttttt | gttatgggtt | tgggtttttat | 4740 |
| taggggtgtg | tatatatagt | gggtaattag | aaaggttggg | ggagttgatt | tagttgagat | 4800 |
| tgttggtgtt | ttgtatgtta | ttttttttga | tttttttggg | attttttagg | ttattaatat | 4860 |
| agtttagagtt | tttgggtgtg | tttttagttgt | tgtttttgta | tttttagggt | ggttttttgt | 4920 |
| gattttgttg | gtaaggggat | ttttaaggga | gagatagggt | atggatgaga | tggagttgat | 4980 |
| ggtttggtgg | aatagtatta | atttgtgttg | ttttttgtga | attttttaa | ggttttgtta | 5040 |

| | | | | | | |
|------------|------------|-------------|-------------|------------|------------|------|
| tagatagtaa | gtagatagg | ttttttgtta | aagagtgggt | tttttttttt | ggaaatattg | 5100 |
| tatgtttgga | aataggagag | aaaggagaga | agagaatagt | tgtttagata | gtagatgga | 5160 |
| ttttaattat | tttagttagt | aatgatggg | tagtggttat | tgtaggttat | atagtattaa | 5220 |
| ggattttaat | aagatgggtt | tagttttttg | gggttggaa | tggagttaa | agtaaaggt | 5280 |
| tttttttttg | ataagtggag | gattttttta | tgggaggagg | gtaggtttta | ggagtggta | 5340 |
| gagatgaggt | ttgtaatagt | agttgttgtt | atgtgtgagt | tttttgattt | atttttgatg | 5400 |
| ggagagattt | tagttagatg | gggttgaaaa | ttatattagt | ttattatcgt | tatttatatt | 5460 |
| taagttttgt | gtttgtttgg | tttgatgaat | ggattgtatg | ataaataaaa | ttatagcgtt | 5520 |
| tttaaaattt | aatagaaata | ggcgtgtgtt | aagttgtgtt | tgttcgtttt | tttttttttt | 5580 |
| tatttttttt | tatatttagt | ttttttgtag | aaattgatat | ttattttaga | aagatatttt | 5640 |
| ttttttattt | tttgggtttt | aagttttttg | ggttgttcgg | tatttgggtt | gagtgggtga | 5700 |
| atattatggt | agattttttg | ttagatttaa | ggtttaagtgg | gtgaatgta | tgtgtagtgt | 5760 |
| tgtgttaggt | gtgtgtcggg | agttatatgt | tttttgggga | tagtttagtg | aagtaggaga | 5820 |
| taaataaata | tgtttggatg | gtggtatgta | tgtgttgtaa | ttttggaatt | tttgggataa | 5880 |
| aagagtcgta | tagagaggta | tttaaggaaa | gaagtgatag | taagtattaa | attaaaaagg | 5940 |
| ataaatatgg | gaaggtggtg | ataattttta | agagaggtag | gataaaaagt | tagggaattt | 6000 |
| agatatattt | ttgttttttt | ttagtgtttt | tgttgagtat | attaagtagg | ggttatgtta | 6060 |
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<210> 322

<211> 2425

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<220>

<221> unsure

<222> (289, 833, 1773, 2369, 2374, 2386)

<223> unknown base

<400> 322

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| ggtcgagcgc | ggtggattat | ttgagggttag | gagtttaaga | ttagtttggt | taatatggcg | 120 |
| aaatttttatt | tttattaaaa | atataaaaaat | tggttaggcg | tagtggttta | tgtttgtaaa | 180 |
| tttagtattt | tgggagggtta | aggggggcgg | attatgaggt | taggagttgg | agattatttt | 240 |
| ggtaaatata | gtgaaatttt | atttttatta | aaaatatata | aaaattagnt | cgggtatggt | 300 |
| tgccggcgta | tgtagtttta | gttatttagg | aggttgaggt | cggagaatgg | cgtgaatttt | 360 |
| ggaagaagag | gtttagtgta | gttttagatcg | cgttattgta | tttttagttg | ggcgtatagag | 420 |
| agatttttg | ttttaaaaga | aaaaaaaaaa | aaattagtta | ggtatgtagt | attagttata | 480 |
| gtgtttgt | aatttttagtt | attcgggagg | ttgaggtagg | agaattattt | gaattcggga | 540 |
| agagaggt | gtagttagtc | gagattatgt | tattgtattt | tagtttgggt | gattgagcga | 600 |
| gattgtgttt | taaaaaaaga | aggtatgtat | ttaaattata | aggttaaaag | agataaagta | 660 |
| tgcgagttaa | ataaagtaag | ttagtttagtg | tgggttggtt | ttttttttta | gtgaaggagt | 720 |
| tttttgtag | aggttttttg | atttgtttaa | tttgattttg | gaaagggttat | tattttaggt | 780 |
| atttttatag | ttatattttg | tatattttgt | gattattatt | attatttttg | ttngttatta | 840 |
| tttatgatta | tgattatata | atgggttttt | tttttttttt | tttttttttt | tttgagttat | 900 |
| cgtattcggg | ttgtatgttt | tttaattttta | taattttaat | gtaaatatta | gttgttttga | 960 |
| attttttagt | ttgtgttata | taagtataga | tttaaaaaata | ttgtgttaatt | ttagattaag | 1020 |
| gtttagaatt | ttgtttttta | attttttgcg | ggtttatgga | tttttttttt | tttttttttt | 1080 |
| tttttttttg | agattaaagt | ttgggtttatc | gtttaatttt | ttaggttgga | gtataaatgg | 1140 |
| tatgatttcg | ggttattgta | atttttattt | tttgggttta | agcgattttt | ttgttttagt | 1200 |
| tttttttagta | gttgggatta | tagaggtata | ttattacgtt | cgtttaattt | ttgtattttt | 1260 |
| agtagaaacg | gggtttttatt | atgttggtta | ggttggtttc | gaatttttga | tttcgtgatt | 1320 |
| cgttaaaagt | gttaggatta | taggtgtgag | tcgttacgtt | tggtagggtt | tacggatatt | 1380 |
| attagtatag | ttaggatttt | aatttttttt | attttgaaaa | ttaggttaat | aaaaattttt | 1440 |
| aggagaaggt | aaaatatatt | atggtgttta | agtattgggg | atttggtacg | tattaggcgt | 1500 |
| tttgtaggtt | tataggagtg | tttttagacgg | tttttaagt | tttttttttg | aatttttaatt | 1560 |
| taataaatga | gttaatttcg | tttttagttt | ttagtttttt | tttgtaattt | attttatttt | 1620 |
| gtagatatatt | tgttttaagg | aattttgttt | gggaaattta | tattagatat | attttattatg | 1680 |
| gcgttttatag | tcgtatgggc | gtgcgttttt | ttgtttatat | ggttagagtt | tcgtttcgtt | 1740 |

| | | | | | | |
|-------------|------------|------------|-------------|------------|------------|------|
| tcgttttttt | aaatttggtg | ggcggatcga | ggnccggggtt | ttatattagg | ttttatttcg | 1800 |
| attagttacg | tttatcgttt | tgatttttag | gttttttttag | tttttgggcg | tacgtgtcgg | 1860 |
| atttttttta | cgagggggcg | ggttgcggtt | aaatttttcg | ttaggttagc | ggtcgggcgt | 1920 |
| tgattgggtt | tatggcggcg | gggtcgggtt | gtgattgggt | agtacgtcgt | ggtttaaagc | 1980 |
| ggtcggcgcg | ggaattaggg | gtttattgog | ggacgggttt | ggagagtatt | cgggttcgtg | 2040 |
| aatttttcgg | aggcgtaagt | agttgtatta | atttgtttat | tgtgttggtt | ggttttttta | 2100 |
| gtaagattcg | gggttagatt | taggtgcggg | ggtaggtttt | gcgcgtgggt | ggggatgagg | 2160 |
| tggtcgtggt | gatatgttgt | gtttacgtat | tcgcgtaggg | cgggttttta | aatgatttta | 2220 |
| tttttttttt | taggtgattt | tcgggtcgat | gttttttaga | aaaaggtaat | ggtttcgcgg | 2280 |
| ggttgggggtg | gagttttttt | ttttttttcg | gggatttttt | gtttcgtttt | tttttttttt | 2340 |
| tttttttttt | tttttttttt | ttttttttnt | ttntttttat | ttttnttttt | ttttttaaga | 2400 |
| tgtatttttt | tttttttttt | ttttt | | | | 2425 |

<210> 323

<211> 2425

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<220>

<221> unsure

<222> (40, 52, 57, 653, 1593, 2137)

<223> unknown base

<400> 323

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| gggagaaagg | aagaagaaag | gtgtattttta | gggaaagggn | aaagggtagg | gnaaggngaa | 60 |
| ggggagggga | ggggagggga | gggaagggga | ggggagggac | gggataaggg | gttttcggag | 120 |
| aagaggaagg | agtttttattt | tagtttcogcg | aagttattat | tttttttttg | agaatatcgg | 180 |
| ttcgagaatt | atttagagga | gagggtgagg | ttatttgagg | gttcgttttg | cgcggtgcg | 240 |
| tgatataagg | ttattattac | gattattttta | tttttagtta | cgcgtagggt | tggttttcgt | 300 |
| atttggtatt | gttttcgggt | tttggtgggg | gagttaggta | gtatagtggg | taggttaatg | 360 |
| tagttttattg | cgttttcggg | aagttttacga | attcagatat | tttttaaggt | cgtttcgtag | 420 |
| taagtttttg | gttttcgcgt | cgatcgtttt | aaattacggc | gtgttggtta | attacgagtc | 480 |
| ggtttcgtcg | ttatgggggt | aatttagcgtt | cggtcgttga | tttggcggga | gatttggtcg | 540 |
| tagttcgttt | tttcgtggga | ggaattcggg | acgtgcgttt | agggattggg | agggtttgga | 600 |
| aattagggcg | atggacgtgg | ttgatcgggg | tgggggttgg | tatgaagtgt | cgntttcggg | 660 |
| tcgtttatta | agtttaaagg | ggcggagcga | ggcgggggtt | tggttatata | aatagaggga | 720 |
| cgtacgttta | tgcggttgta | gacgttatga | tggatgtggt | tggtgtgggt | tttttaagta | 780 |
| gttttttttg | gaataagatg | ttttagaggg | taggtggatt | gtagggaggg | attaaggggt | 840 |
| gggcggag | ttagtttatt | tattagattg | gaattttaag | aagggaagtt | agaagtcggt | 900 |
| agaggtattt | ttgtgggtat | gtagagcgtt | tagtgcgtgt | taggttttta | gtgtttgagt | 960 |
| attatgggtg | attttatttt | tttttaagga | ttttgttaa | tttggttttt | aggataaaga | 1020 |
| aaattgaagt | tttgattatg | ttaataatat | tcgtagattt | tgtaggcgt | ggcgggttat | 1080 |
| atttgtaatt | ttagtatttt | tggcggatta | cgaggttagg | agttcagat | tagtttggtt | 1140 |
| aatatgggtga | aatttcgttt | ttattaaaaa | tataaaaaatt | agtcgggcgt | ggtgatgtat | 1200 |
| ttttgtaatt | ttagttattg | gggaggttga | gataggagaa | tcgtttgaat | ttagaagggtg | 1260 |
| gaggttgtag | tgatttcgaga | ttatgttatt | tgtatttttag | tttgggaagg | tgggcgtag | 1320 |
| attaagattt | agtttttaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaatttat | agattcgtag | 1380 |
| gaggttaggg | gataaagttt | tggattttga | tttgaggtta | tataatgttt | ttgggtttgt | 1440 |
| gtttatgtgg | tataggttga | aggattttaga | atagtttgga | tttatattgg | ggttgtgaag | 1500 |
| gttagaaata | tataggtcgg | gtgcggtggt | ttaaaaaaa | aaagaaagaa | agaaaagaaa | 1560 |
| tttattgtat | aattatgatt | ataaataata | gtnaataaag | atggtggtag | tgattataga | 1620 |
| gtgtgttagg | tgtggttgta | aggattttat | aggtaataat | tttttttaggt | atagattgga | 1680 |
| tagatttaag | gatttttgat | aaagagtttt | tttattggga | ggaagaagta | atttatattg | 1740 |
| attggtttgt | tttattttat | tcgtatgttt | tatttttttt | aatttttgta | tttgatata | 1800 |
| tggttttttt | ttttgagata | tagtttcgtt | tagttatttta | ggttggagtg | tagtggtatg | 1860 |
| atttcggttt | attgtaattt | ttatttttcg | ggtttaagtg | atttttttgt | tttagttttt | 1920 |
| cgagtgggtg | ggattatagg | tatatgttag | ttggtattat | atgttttggt | aatttttttt | 1980 |
| tttttttttt | tgagatagag | tttcgtttta | tcgttttaggt | tggagtgtag | tggcgcgatt | 2040 |
| tgggtttatt | gtaatttttt | tttttagggg | ttacgttatt | tttcggtttt | agttttttga | 2100 |

| | | | | | | |
|------------|------------|------------|------------|------------|-------------|------|
| gtagttggga | ttatatgcgt | tcgtaattat | gttcggntta | atTTTTTTgt | atTTTTtagta | 2160 |
| gagatggggt | tttattgtgt | tagttaggat | ggTTTTtaat | TTTTgatttt | atgattcgtt | 2220 |
| TTTTTTgggt | TTTTaaagt | ttgggtttat | aggtagagt | tattgcgttt | ggTTaaTTTT | 2280 |
| tgtattttta | atagagatgg | ggTTtcgtta | tgttgtagat | attggTTTTg | aattTTTTggt | 2340 |
| TTtaagtgat | ttattcgttt | cggTTTTtta | aagtgttgag | attatagggt | tgagttattg | 2400 |
| tgtcgggttt | ggatagatat | TTTT | | | | 2425 |

<210> 324

<211> 2359

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 324

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| TTTTgtttt | gtgggggttg | ttgtgttatg | tgggggtggg | gggaagtaga | ttggttaggg | 120 |
| tttgatatta | ggagttatgg | TTTTgtttta | TTtatcgtat | taattgtgat | ttgttttgga | 180 |
| gttttagtttc | gtagaggttt | aaggagaggg | gtgggaaagt | gttttttaga | gtagagcggg | 240 |
| ggagttatg | gttgggggtg | gtggagggtta | ggggttatat | ggggttggtt | ttagaatcga | 300 |
| ggggTTTTgc | ggatttggtta | tatttttggg | aaatggcgtt | gtgggcgttt | cgtttggtgg | 360 |
| gggtggtata | aggttttttt | ttattttatt | tttgtagttg | gtattttgtg | ggttatttat | 420 |
| TTTTcgtatt | TTTTtagttt | atttgTTTTa | tcgcggttgt | attatatatt | ataaggtaag | 480 |
| ggttatatta | ggtatgtttt | tggtgtttat | ttgaaaatat | cgcgttttcg | tttgagggtta | 540 |
| ttatttagtt | tggggaggta | ggaggagggt | tggaatatga | tgtgaatatg | ataggtttgt | 600 |
| gagtagggta | ggtagatata | gttcggttgg | gtataaagtt | tattttttga | gtatgagtcg | 660 |
| aggtagaggg | tggtggggag | tatatagagg | atgttttttt | agttgtagg | gtattagtgt | 720 |
| tattattaag | tattttaaag | gggaattgtt | tgggggtggg | tggttagttt | tgtagtaggg | 780 |
| attgagatag | ttattgtggt | attaaagatt | agtagtgtag | tatttacgtt | tagagggttg | 840 |
| aatttatttt | gtgtattgtt | ggtttggaag | gtaggaatta | TTTTtagtta | gttgttttgt | 900 |
| agtattatcg | ggtagtttat | agagttatag | atagattttg | gtagttggaa | aataggttta | 960 |
| gagaaggggg | gtgtgggttg | ttattttag | ttattgtttg | gttttagagt | tgtgttattt | 1020 |
| gtgtaaagaa | gttagtggtta | aggtcgagcg | cgggtggttt | tatttgtaat | attaatattt | 1080 |
| tgggagggtcg | aggtaggtgg | attacgaggt | taagaatttg | agattagttt | ggttaatatg | 1140 |
| gtgaaaaatc | gtttattaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaattagt | taggtatggg | 1200 |
| ggtaggtatt | tgtaattttt | gttatttttag | aggtcgaggt | aggagaattg | tttaaattcg | 1260 |
| ggaagcggag | gttatagtgta | gttaagatta | tgttattgta | TTTTtagttt | ggcgaatag | 1320 |
| taagatttta | TTTTgggaaa | aaaaaaaaaa | aaattagcgt | taatggttgt | ttattattga | 1380 |
| tggttgagggt | agttgggtgat | aaattgattt | aaaagagagg | atttgtagg | ttgggtgcgg | 1440 |
| gggtttacgt | ttgtaatttt | agtattttgg | gaggttgacg | taggaggatc | gtttgagttt | 1500 |
| ggagtttcga | gattagtttg | ggtaatattg | taaaattttg | TTTTtattaa | aaatataaaa | 1560 |
| attagttagg | tatgggtggt | tatatattgt | gttttattta | tttaggagg | tgagggtggg | 1620 |
| ggatcgtttg | agtttggtag | gttaagggtg | tagtgagttg | tttgggcgat | aggatattgt | 1680 |
| tttaaaaaat | aaagaaataa | ataataataa | taataataaa | aatagaattt | gttttttgtt | 1740 |
| tattttgtgt | ggtgataggt | tagagggatt | tttgatttta | ggtttattag | ttgttttttg | 1800 |
| TTTTgttgta | TTTTgttttt | atagggtttg | taggggttaag | gttttttagt | gttttgctcg | 1860 |
| ggtttttggg | gtagggcggg | gtgggtggtg | gtttcgtttt | TTTTtatttt | agatttttcg | 1920 |
| gttatttttag | TTTTTTTTat | taagtaggat | tttgagatta | gagtttttag | taggggtttt | 1980 |
| ggagggtatt | gtttattcga | gtggaggggtc | gcggtaggaa | taagtgcggg | ggtttttaag | 2040 |
| tttcgtttta | ggtttagcgg | aattttgaag | aggaggggga | gggtgagtcg | ggcgcggttg | 2100 |
| tgttagttga | gtgatagtta | cgggatcgcg | attaattttg | tttggttttt | tagaggagta | 2160 |
| ggagggtatga | gtaagggttt | tttagcgcg | taggttagtg | gtgggtgtgt | tggggggag | 2220 |
| gttggttttg | agggtttcgg | ggatggtgac | gtttgaagtt | tcgtgtagag | gtggggagat | 2280 |
| ttttgagggt | tggttttcga | gggtgggggg | gtttagggtt | tatgtggggg | ttgcgttttt | 2340 |
| aagttttatt | TTTTtttagg | | | | | 2359 |

<210> 325

<211> 2359

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 325

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| tttaggggaa | atgggggttg | aaggcgtagt | ttttatatgg | gatttagggt | tttttagttt | 60 |
| cggaattag | tttttaggga | tttttttatt | tttgtacggg | gttttagacg | ttattatttt | 120 |
| cggaattttt | taagatagta | ttttttttaa | gtattttatt | attggtttgt | cgcgttgga | 180 |
| gatttttgtt | tatttttttt | gttttttttag | gaagttagat | agagttggtc | gcggtttcgt | 240 |
| gattgttatt | tagttgatat | agtcgcgttc | ggtttatttt | tttttttttt | tttagggttt | 300 |
| cggtgggttt | ggggcgggtt | tttgaggttt | tcgtatttgt | ttttgtcgcg | attttttatt | 360 |
| cgaatgggtt | agttttttta | gggtttttgt | tgggagtttt | ggttttaaga | ttttgtttgg | 420 |
| tgggaaaagt | tgggatggtc | ggaggggttt | ggatgagggg | gaacgggggt | gttattttatt | 480 |
| tcgtttttata | ttaggggttt | cggtagggcg | gttgagggtt | ttggttttat | taagttttgtg | 540 |
| gggtaggggt | gtagtaggat | agggaatagt | tagtgggttt | gaatgtagag | gtttttttga | 600 |
| tttgtttatta | tatagggtag | ataggaggtta | agttttgttt | ttgtttgtgt | tggtgtttgtt | 660 |
| tggtttttttg | ttttttgaga | tagtgtttttg | tcgttttaggt | agttttattgt | agtttttgatt | 720 |
| tgtaggtttt | aagcgatttt | tttatttttag | tttttttagt | aggtgggatt | ataggtgtgg | 780 |
| gttattatgt | ttggttaaatt | tttgatatttt | tagtggagat | agggttttgt | aatgtttgttt | 840 |
| aggttggttt | cgaattttta | agtttaagcg | atttttttgc | gttagttttt | ttaaagtgttg | 900 |
| ggattatagg | cgtgagttat | cgtattttagt | ttagtaagtt | tttttttttg | aattagtttg | 960 |
| tatttaatta | ttttaaatagt | tagtaatggg | tagttatttg | cgtaattttt | tttttttttt | 1020 |
| tttttaagat | gggtgtttgt | tttgtcgttt | aggttggagt | gtagtggtat | gatttttggtt | 1080 |
| tattataaatt | ttcgttttttc | gggtttaagt | aatttttttg | tttcgggttt | tggagtagtt | 1140 |
| gggattatag | gtgtttgtta | ttatgttttag | tttaatttttt | tttttttttt | tttttttttt | 1200 |
| ttagtagacg | gtttttttatt | atgttggtta | ggtttggttt | aaatttttga | tttcgtgatt | 1260 |
| tatttgtttc | ggtttttttaa | agtgttggtta | ttatagggtg | gagttatcgc | gttcgggttt | 1320 |
| ggtattgatt | tttttatata | agtatatag | ttttaagggt | agatagtaat | tgtaggtaatt | 1380 |
| agtttatatt | tttttttttt | gggtttgttt | tttagttgtt | tagatttggt | tgtagtttta | 1440 |
| tgattgattc | gatgatgtta | taaggtagtt | gggttgaggt | ggtttttaqt | tttttaggtta | 1500 |
| atagtgtata | aaatgggttt | tagttttttg | gcgtgggtat | tgtattgttg | gtttttgatg | 1560 |
| ttatagtgg | tgtttttagtt | tttggttag | gttgatttat | tttaattttaa | atagtttttt | 1620 |
| tttggggtgt | ttggtaatga | ggttgatgtt | ttggtagttg | gggaggtatt | ttttgtgtgt | 1680 |
| ttttatttat | tttcggtttc | ggtttatgtt | taggggatga | gtttttgtgt | tagtcgggtt | 1740 |
| gtattttatt | gtttttgttta | taggtttgtt | atgtttatat | ttatgttttag | tttttttttt | 1800 |
| gttttttttag | attgagtggt | gttttttagac | ggaaacgcgg | tattttttaga | ttaaattattag | 1860 |
| aggtatgatt | gatgtgggtt | ttgtttttgtg | gagtggtatg | tagtcgcggg | gagataaagt | 1920 |
| agttgaagga | atgcggaggg | tgggtagttt | tatagggtgt | agttatagaa | gtggggtagg | 1980 |
| aagaagtttt | gtattatttt | tattaggcga | agcgtttata | acgtttattg | ttaaagggtat | 2040 |
| ggtaaatctcg | taagggttttt | cggtttttggg | gttagtttta | tgtgggtttt | ggttttttatt | 2100 |
| agtttttagtt | atgatttttta | tcgtttttgtt | ttgaaggata | ttttttttatt | tttttttttg | 2160 |
| tttttttcg | aggttaggtt | ttaaaggtagg | ttatagttgg | tgcgggtgggt | aagatagagt | 2220 |
| atgggttttt | gggtgttaagt | tttggttagt | ttgttttttt | ttattttttat | atgatatagt | 2280 |
| agattttata | ggatagaggt | tttttagaag | aggtcgtatt | cgatagggtt | ttgtatatat | 2340 |
| atttatgtta | taggtggag | | | | | 2359 |

<210> 326

<211> 2474

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 326

| | | | | | | |
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| tacgggtagt | tgggattata | ggtatacgtt | attacgttcg | gttaattttt | gtattttttta | 60 |
| tagagatggg | gttttggttaa | tacgttggtt | aggtcgggtt | tgaatttttg | atttagagtg | 120 |
| atttggtttg | tttggtattt | taaagtgttg | ggattatagg | tgtgagttat | tatatttagt | 180 |
| tatttttgtt | atattttgat | ggatatatag | aatagtttta | atttaaatgtg | ggaagatatt | 240 |
| atataagggg | atgaattttta | ggtgggtgag | attaatgggg | gttggttttg | aggttggtta | 300 |
| ttatagtatt | tttttatttt | ttttgttttg | tttggttttg | tttttttatg | tgtagggttt | 360 |
| atttttaaat | aggttttttt | tagagagtga | taaagggtgat | tattaatgtg | tttagattta | 420 |

| | | | | | | |
|-------------|-------------|------------|-------------|-------------|-------------|------|
| tatgttttgt | gttttagtaat | tttagtgtaa | tttttttgg | tttttaaaag | ttttggtaaa | 480 |
| agttttaagt | tagtatttta | attggtttaa | attgtgtata | tgtttatttt | tgaatttaatt | 540 |
| attgtggatt | agagatgtta | tgttttgatt | gattagattt | aggttatatt | tttagtttta | 600 |
| gttttgaggg | tagagttggt | agtattagag | tttatggaag | aagtaagaga | ggagtcggtg | 660 |
| ttaaaggaaa | aattaaagt | ttattatcga | attaggatag | atggtgggta | gtatatgtgt | 720 |
| atttcgtttt | ttttttatgt | tttagttgta | tatttttagtg | ttttttgggt | tagtattttt | 780 |
| tttattaaat | tattttgttt | tttgttttat | ttttttggtt | tggtagaatg | ttaagatggg | 840 |
| tttaagattt | ttatttttgg | tggttgata | tttttttagt | attttgttaa | atatgaatgt | 900 |
| agatgttttt | gtgaaagaat | tttgatatg | taatttaagt | tttaaattgt | ttgattttta | 960 |
| aataaggaga | atggtagggt | taggtatggg | ggtttatatt | tgtaatttta | gtattttggg | 1020 |
| aggttaaggc | gggtagatta | cgaggtagg | agatcgagg | taattttggt | aatatagtga | 1080 |
| aattttatatt | ttattaaaaa | tataaaaaat | tagttgggag | tggtggcggt | tggtttgtatt | 1140 |
| tttagttatt | taggaggttg | aggtaggaga | atggcggtga | ttcgggaggc | gtagtttgta | 1200 |
| gtgagtttaag | atcgtgttat | tgatttttag | tttgggtgat | agagtttagat | tttgttttta | 1260 |
| aaaaaagaaa | aaaaaggaga | atggttttgg | tggttttgat | tttagttagg | gagtttttaa | 1320 |
| aaggcgatat | atggttcggt | gtagtgggtt | aggtttgtta | tttttagtatt | ttgggaggtc | 1380 |
| gaggcggttg | gattacgagg | ttaggagatc | gagatttttt | tggttaatat | ggtgaaattt | 1440 |
| cgttttttatt | aaaaagataa | aaaattagtt | ggcggtggtg | gtgggttttt | gtagtttttag | 1500 |
| ttattcggga | ggttgaggta | ggagaatggc | gtgaattcgg | gaggcgaggt | ttgtagtgag | 1560 |
| cggagattgc | gttattgtat | tttagtttgg | gcgatagagc | gagatttcgt | tttaaaaaaa | 1620 |
| aaaaaaaaaa | aaaagaaaat | taaaagtggg | tattgttgta | agatgttgag | tttatggtag | 1680 |
| ttgtttatatt | gataatagaa | aatgaatata | ttttatagtg | gattttaaga | tttttatgat | 1740 |
| ttttgattttt | tttaattttt | tgatttttat | aggattttaga | gtataagaat | gttttttttt | 1800 |
| ttgttttttag | ttttattatt | tagaaaagag | aggaggagtt | tagtttttta | ttttattttt | 1860 |
| atttataaat | ttttaatttt | tcgggtttta | aggggtgatt | aaggaagttg | ttttattttg | 1920 |
| ttttttataa | atagttttgt | ttttattagg | tttaggaggg | tagttttgatt | aattttttatt | 1980 |
| tttaagattt | ttgggttagtt | ttattgattt | ggattttttg | ataggtagtt | ggattaacgg | 2040 |
| acggatgtta | tgagggtttt | gttggttttt | gggtttttgt | tggtgagttt | ggagtttaata | 2100 |
| ttttcgggtga | gtgtgttggt | aattaggatt | gttttaggat | tggtttgggg | ggtcggttatt | 2160 |
| atagtttatga | gttatgggtt | ttgtttatga | tttggtgggt | taggtgatta | ggagggtttat | 2220 |
| gtggaaagggt | gagggttagtt | cggaagggtt | aggtagagga | gatagataat | tagattgggt | 2280 |
| ggatataagg | gtatagtttg | tattttttgg | ggagatgggt | tttaagaaga | taacgggggg | 2340 |
| aggtagaaaag | gggttggtgt | ttgggaagaa | atttttgtat | ttttgggttg | tgagaggaag | 2400 |
| ttgtagatta | gtaatagatc | ggtggtaggt | tatgatttat | agttagtttt | ttgttttttt | 2460 |
| tttttttttg | taga | | | | | 2474 |

<210> 327

<211> 2474

<212> DNA

<213> Artificial Sequence

20>

223> chemically treated genomic DNA (Homo sapiens)

<400> 327

| | | | | | | |
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| tttataagg | agagaagaag | gtagggaatt | gattataagt | tatagtttgt | tatcgatttg | 60 |
| ttgttagttt | gtagtttttt | tttatagttt | agaaatgtag | agattttttt | tttaagattta | 120 |
| aatttttttt | attttttttc | gttggttttt | taaggtttat | tttttttaga | aatgtaggtt | 180 |
| gtgtttttgt | atttattttg | tttggttggt | tggttttttt | gtttgggttt | ttcgggttgg | 240 |
| ttttattttt | ttatattagg | tttttagtta | tttggtttta | taggttatga | gtagaggtta | 300 |
| tggtttatgg | ttgtgatagc | gatttttttag | aataattttg | ggataatttt | ggtttttata | 360 |
| gtattttatcg | aaagtgttga | ttttaagttt | attagtagga | attttaggag | tagtagaggt | 420 |
| tttatgggtat | tcgttcggtg | gttttagttg | ttatttagga | gttttagatta | ataggatttg | 480 |
| ttaaagggtt | tggaaataga | gatttggttaa | gttggttttt | tgagtttggt | ggggtatagg | 540 |
| ttgtttgtgg | aaagttaagt | ggagtaattt | ttttgggttat | tttttgagg | tcggaaagtt | 600 |
| gggagtttgt | gggtgggggt | gaaatgaaga | gttggttttt | tttttttttt | tttagatagt | 660 |
| gggattggaa | gtagaagaag | ggatattttt | atgttttggg | ttttgtggag | attaggaggt | 720 |
| taaggagatt | aaagattatg | gggatttttg | agtttattgt | gaagtgtgtt | tatttttttat | 780 |
| tgttatgtaa | taaattatta | taaattttagt | attttataat | aatattttatt | tttaattttt | 840 |
| tttttttttt | tttttttttt | tgagacggag | tttcgttttg | tcgttttaggt | tgaggtgtag | 900 |
| tggcgtaatt | ttcgtttatt | gtaagtttcg | tttttcgggt | ttacgttatt | tttttggttt | 960 |
| agtttttcga | gtagttggga | ttataggagt | ttattattac | gttttagtta | ttttttggtt | 1020 |

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|------|
| ttttagtaga | gacgggggtt | tattatgtta | gttaggatgg | tttcgatttt | ttgatttcgt | 1080 |
| gatttattcg | tttcggtttt | ttaaagtgtt | gggattatag | gtttgagtta | ttgtatcggg | 1140 |
| ttatgtgtcg | ttttttaaga | atttatttga | ttagggttagg | tttattaaag | ttattttttt | 1200 |
| tttttttttt | ttttttgaga | tagagtttgg | ttttgttatt | taggttggag | tgtagtggta | 1260 |
| cgattttggt | ttattgtaag | ttacgttttt | cgggtttacg | ttattttttt | gttttagttt | 1320 |
| tttgggtagt | tggaatata | ggtattcgtt | attacgttta | gttaattttt | tgtattttta | 1380 |
| gtagagatgg | ggtttttattg | tgtagtttag | gatgggttcg | attttttgat | ttcgtgattt | 1440 |
| gttcgttttg | gttttttaaa | gtgttgggat | tataggatg | agttattatg | tttggttttg | 1500 |
| ttattttttt | tattttaaag | ttaaataaatt | tgggatttaa | attatatgtg | taaaattttt | 1560 |
| ttatagaagt | atttatatatt | atgtttgata | gaataattgg | gagggtgtga | aatatttaggg | 1620 |
| gtagagattt | tggggttatt | ttagtatttt | attaattata | ggaagtggag | taagaaagta | 1680 |
| aatgatttaa | tgagaaaagt | gttaaattaa | gggttattaa | gatgtgtagt | tggaatatga | 1740 |
| gaagaagacg | gggtgtatat | gtgttggtta | gtatttggtt | tgggttcggt | atgatatttt | 1800 |
| gatttttttt | ttagtaacga | tttttttttt | atttttttta | tgggttttag | tgttgtaaat | 1860 |
| tttattttta | gagttagggt | tagagatgtg | gtttagggtt | gggttaattag | agtatgatata | 1920 |
| ttttaattta | tagtgattgg | tttagagata | agtatatata | taatttaggt | taattaaagt | 1980 |
| gttagtttgg | gatttttgtt | agaatttttg | ggaaagtaaa | aaagttgtat | tgggggttatt | 2040 |
| aagtatagag | tatgtgggtt | tgaatatatt | gatgattatt | tttgttattt | tttagggagg | 2100 |
| gtttgtttga | gaatgaagtt | tatatatagg | daaagtaaa | tgaattttat | aggaaggatg | 2160 |
| gaaagatgtt | gtggtagata | gttttaaaaga | tagtttttat | tgatttttat | tatttaggat | 2220 |
| ttatgttttt | gtatgggtgt | tttttatatt | gagttagggt | tgttttgtgt | gtttattaga | 2280 |
| ttatgataga | agtgggtggg | tgtggtgggt | tatatgtgta | attttagtat | tttgggagt | 2340 |
| taaggtaggt | agattatttt | aggttaggag | tttaagatcg | gtttgggttaa | cgtgttgggt | 2400 |
| aaattttatt | tttatgaaaa | atataaaaaat | tagtcgggcg | tagtggcggtg | tgtttgtaat | 2460 |
| tttagttatt | cgtg | | | | | 2474 |

<210> 328

<211> 6175

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 328

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| taaaatagaa | tcgtcgggtt | ttgtaaaata | ataattattt | attttataaa | agtgataatt | 60 |
| aaaagatttt | aatagtaata | tagaaagtta | tatgaatata | aagattttaat | ttttttaaag | 120 |
| tttagttttt | ttaagtaatt | aaaaatttga | taagataat | aagaatgagg | aattattttg | 180 |
| agaaaatgta | aaattttttt | ttttattttt | tgagataggg | ttttattttg | ttatttaggt | 240 |
| taaagtgtag | tggatataatt | atagttttatt | atagttttga | atttttggat | ttaagtgatt | 300 |
| tttcgttttt | agttttttta | gtagtttaaga | ttatagggtac | gtattattat | attttagttaa | 360 |
| ttttttttag | agatgggggt | ttgttatatt | gttttggttg | gttttgaacg | agttttaagt | 420 |
| gagcgtgagt | ttttttatttt | atttttttta | agtattagga | ttatagggtat | gagttattgt | 480 |
| tttttagttt | aaaataattg | tttttttaggt | tagttattaa | aaacgtaaaag | aaaaattttt | 540 |
| tgtagtgtga | ttgttttttt | ttatgggaag | tttatttaga | taatttgtaa | gttaaatttg | 600 |
| atgaaaataa | tatttgaatg | taatttagata | tagaaagatt | gtttaagggt | atgagttagt | 660 |
| gagtttaagt | tcgtattatt | tgttatataa | tagttaataa | gttttagagat | aaggtagttg | 720 |
| ggttaaggaaa | gttatttttat | tttagagaatt | agaaaattaa | gaagatgggtg | gattagttatt | 780 |
| ataaagaatt | atttgaagtt | agtatgaacg | ttagggtttt | ttttatgtta | aggggaagggg | 840 |
| aagaagaagg | ggattgggat | taagagggtga | ttgatgatta | tagatatttg | ggtgttagta | 900 |
| agggtttgag | gacgttgtaa | aatttttttt | ttttagggtta | gggtataatg | tttttatata | 960 |
| tttttaatat | aatattgtta | tttgtttgtg | tattttttta | tttttttggg | ggttagtttg | 1020 |
| gggaaaggaa | ttgttattat | tttttttaaa | gttgaattgt | aagttaaatt | tttataatta | 1080 |
| gttgggttat | gtatagagtt | aagtagaagt | ttttagttta | aggataata | tttttggggg | 1140 |
| tttagaggtaa | aatggagtt | gttatgttaa | gttttttttt | attttttttt | ttttttgaga | 1200 |
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<213> Artificial Sequence

<220>

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| ggttttcgag | tttttaaatgg | ttgtaaggat | aaaattTTTT | atTTtgagtt | tttgaaaata | 240 |
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<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 332

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| atatagggtt | ttttggtata | agttaggtta | gagttattgaa | attatattgt | tgtttggtt | 180 |
| tagtaagatt | atTTTgttat | tagttatagt | tatagtTTTT | atgtattgat | attgtatatt | 240 |
| ggattttaag | aaatTTTTgt | tttaagagtt | agaatTTTT | atattattat | ttttagggag | 300 |
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| tttaaaaaga | tgataaaagt | aattagatat | ttttttttgt | tttataattt | tagtttagat | 8040 |
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<211> 8172

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 333

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| ataaattagtt | taattttaggt | tgaaattgta | gaataaggaa | aagtattttag | ttgattttgt | 180 |
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| aagttaaaaat | taagttgttt | aatttaatttt | ttaagaaatt | agaagagagt | gagaggtaat | 420 |
| agttaaatgt | ttaatagggtt | agtttttagtt | gatatgatga | gaaagttttt | tttgttttaa | 480 |
| tttataagta | aagttattttc | gaaaagatta | atttgttttt | tgttttttgt | ttttgttttt | 540 |
| tttggttttt | ttttgttttat | aaagttaaat | ttttttgtta | ggtacgggtg | tttacgtttg | 600 |
| tgatttttagt | atTTTTgggag | gttaaggcgg | gtggattatg | aggttaggag | atcgagatta | 660 |
| ttttggttaa | tacggtgaaa | tttcgttttt | attaaaaata | taaaaaatta | gtcgggtgtg | 720 |
| gtggtgggtg | ttttagatttt | tagttatttcg | ggagtttgag | gtaggagaat | ggtacgaatt | 780 |
| taggaggcgg | atTTTTgtagt | gagtcogagat | ttggttattg | tatttttagtt | tgggtgatag | 840 |
| agcgagattt | cgTTTTtaaaa | aaaaaaaaaag | ttaaattttt | ttggttagtt | ttgtagaata | 900 |
| ttcgattttat | tttatggaat | gaagtgtttt | ttgattatag | atttataagt | aaaagttaat | 960 |
| tgagggttag | gcgtgggtggt | ttatgtttgt | aatttttagta | ttttgggagg | cggagggtggg | 1020 |
| tggattgttt | gaatttaggt | aattgaaatt | atTTTgggta | atatgatgaa | atTTTatttt | 1080 |
| tattaaaata | ttaaaaaatt | agttgggcgt | ggcgggtatac | gttagtaatt | ttaggtattc | 1140 |
| gggaggttga | ggtgggagaa | ttatttgagt | ttgggaggcg | gaggtttag | tgagttaaaga | 1200 |
| ttgtgttatc | gtatttttagt | ttgggtaaga | gagtgagatt | tcgttttaaa | aaaaaaaaaaa | 1260 |
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| agtgaatttt | tgttttttaa | aaaaaaaaagg | taaatataga | gattaaaata | gaaaatttag | 1740 |
| aaaatttttaa | aggtagtttg | atagggtaaa | aaagaaaaaa | ataaaattta | gaaagtataa | 1800 |
| atatatgtag | aagttttatta | taaaataaat | atgttttttg | agatttgttg | agagcgatta | 1860 |
| tttaataaat | gttattagaa | taagtgtgga | attatttggg | gaagaaaaaa | agtttaatttt | 1920 |
| ttatttgagt | ttttattagt | gaaataaatt | ttaaagggat | ttaaggttta | agtttttata | 1980 |
| ataagattat | aaaataatta | tagtatatat | atataaatat | ttattttaag | tataaaagaa | 2040 |
| aaatagattt | gagaatataa | acgttataag | aataaatttg | aaattagaaa | gatattaaat | 2100 |
| ttttagaata | atattattat | atattaatgg | gagaagaaaa | atatttttaa | tagaaaaagg | 2160 |
| gtaagagaaa | taaagtggta | ttttatata | agatatatat | atatagaaat | gatgaataa | 2220 |
| tatatgaaaa | agtttaattt | attgataata | aaagaaatgt | aaatatgtag | tatgaaatag | 2280 |
| aagtataatg | ggatgggtgag | aataattatt | taatttataa | tatttagagg | gaaatagagg | 2340 |
| tatttatggg | aggtgatatg | tataagaatg | atttattttg | aataatcggt | aaggagaata | 2400 |
| atttgttatt | atataattat | atttttataa | tcgtttataa | tatttgattt | tattttttta | 2460 |
| tttttaagat | gtgattttta | aaatgggtata | gagatagaga | tagagataga | tttttttata | 2520 |
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| gagaatagtg | atttagaaaa | atatttgggtg | agttagtaag | gtagaagggtg | aagttatatg | 2640 |
| agtaattgat | tatttatatg | tacgatatga | aatgaagttag | gttatgaaat | atatgatcgc | 2700 |
| gagagagatg | tttagaatat | attgaggggt | ttgtattaaa | taataagttta | tttttggtatg | 2760 |
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| aaatatatat | gagttttata | gttataaaga | aagaaagatt | tttttaaaat | gatataacgt | 2880 |
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| agtagttttt | agtttcgaaat | tattgtggaa | attttaaattt | ttttttttta | aaagtttagtt | 3000 |
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| gtagggttgt | atttttaggat | aagtgatatg | tgtaaaattt | ttaagttttt | tgtagtttta | 3180 |
| gagttagagg | aggagattga | attattgggg | gtagagtttaa | atatgggtgat | agtagagagt | 3240 |
| aaattatttta | attttgagat | tattttatttg | atagtatttt | agaaatagtt | taatgttggt | 3300 |
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| gggaggatta | tttgagttta | ggaaggttta | ggttgtagtg | aattatgatt | gtattattgt | 5400 |
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| tttaaatgat | tttagagtaaa | ttttatttgt | tgtagttaag | aattttgtga | tttagatagt | 8160 |
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<211> 1278

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<220>

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| ttttagaatt | tataggttta | tgtgagatat | gattttttta | aatgaagatt | tagagtaattg | 120 |
| ggtaaaaaag | aggattttgt | gtgtttgttg | attgttttagt | tagtgaattgt | atagttttttg | 180 |
| tttttatatt | aggattattt | tttttttgtt | ttttgttgtt | aaatgtttta | tttttgggta | 240 |

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| tttgtatgtt | tttgtgggtt | tttgggggta | tattttttcgg | ggttgggtta | gaagggttg | 900 |
| gtgggttggt | ttagggtgtt | atatattttag | ggagatgttt | tcgttttttg | gaattttggt | 960 |
| ttcgattttt | gtaaatttcg | gtaaatgtgt | aatttcgattt | tgtatcggtt | tattttgttt | 1020 |
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| gtttttggta | tttgtttttt | tggttagttt | gtgggttggt | taagtgtgt | aattttttt | 1140 |
| tttagtttgt | gtataggtag | tttggaata | gttttatttt | tatttttttag | ttataaatag | 1200 |
| ggtttcgtga | ttcggtagg | ggaagaagtt | gtcgttgttt | tgggtattat | agtagaaggt | 1260 |
| aagtcggggg | ttttttta | | | | | 1278 |

<210> 335

<211> 1278

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 335

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| tggtcggggtt | acgaggtttt | atztatagtt | gaggggtggg | gatggagttg | tttttaggtt | 120 |
| gtttgtgtat | aggttggaga | ggaggggttat | attatttgggt | tagattatag | gttggttaga | 180 |
| aggatagatg | ttagaagcga | tattttacgtt | gggatttttt | ttaggaagtt | ttagtgtatc | 240 |
| atgtagagtt | ttattgttga | atagagttag | tcggtgtagg | gtcagattat | atattttatc | 300 |
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<220>

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| gtaagaaatt | ttttggtttt | taagatttgg | ataagttatt | tagagtgtgg | ttatatattat | 6000 |
| agagtaaatt | tggttttcga | gttgaaata | aggatatagg | ataaggatat | agaaaggata | 6060 |

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| atttaaagt | atgttgtttt | ttagtttttaa | attgttttta | agtttatttt | ttagttgttt | 6180 |
| ttattttatt | ttatatattt | tttttttagg | atgtttgaat | ttagagtttt | gcgcgtgttt | 6240 |
| tatataaatt | tttttgtttg | gaattgtaat | tattttatat | ttttttaata | tattaggtgt | 6300 |
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| agaaggaaaa | aagtatatga | ggtgttaaat | taatttttag | gaattttttt | aggatttagt | 7560 |
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| tattgttaatt | ttcgtttttt | gggtttgtga | tttttttgtt | ttagtttttt | gagtagttgg | 9780 |
| gattataggt | atttattatt | acgtttggtt | tatttttga | ttattagtag | agatagtgtt | 9840 |

| | | | | | | |
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| tttttaaat | gttgggatta | taggtatgag | ttattgtgtt | tagttaggat | gtatattttt | 9960 |
| gatgttgatt | tttttatatt | atttttttga | atatttttagt | aatgttcggt | atattcgtgg | 10020 |
| agatgaatat | tacgtgggta | tttagtgag | attaggagg | ttagggaaga | ttgtttttt | 10080 |
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| atattggagg | tggggtttgg | tgggaggtgt | ttgggttata | gggggtggatt | ttttatgaac | 10260 |
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| aagatttgat | tgttaaaaaa | gagtttggtt | ttattttttt | ttttaatttt | ttttttttta | 10380 |
| tgtgatttgt | ttatttttagt | ttttttattt | tttttattgt | ggatggaagc | ggtttgaggt | 10440 |
| ttttattaga | agtagatggt | agtattatgt | tttttgata | gtttgtaaaa | tcgtgagtta | 10500 |
| aaagatttgt | ttttttttata | cgttattttt | attttttttag | gtattttttt | atagtaatat | 10560 |
| aaatatagta | agacgtatgg | tgtgtgagtt | tgttaggggt | gttatagtaa | agaattatat | 10620 |
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| gttttttatat | ggtttttttt | ttgtacgtat | ttgtgtttta | attttttttt | tttataagaa | 10800 |
| tattagtaag | attagattag | ggtttatttt | taattatttg | tttaaagatt | ttttttttta | 10860 |
| atatagttat | atttgaggta | tttaagggtta | agatttttaag | atatatatatt | gtaggggag | 10920 |
| gagatataat | ttagtccgta | atatacgggt | agggtatgag | tttgggaagtt | tttagttttt | 10980 |
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<10> 340

<211> 2526

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 340

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| attatgtagt | aagtattttt | taagtttgtt | ttgtgttagg | tgttgttagg | gatattggag | 120 |
| gatgcgaagt | gaataaaaata | ggtagtgttt | aatttttaagt | aggaagcgtt | aagtttatag | 180 |
| gtgtttgata | taggaatagg | aggaagggtt | agtaagaggt | ttgggatggt | tttcgggatt | 240 |
| tttatggggg | ggattagatt | aggtaatat | gaatatatt | tagaggaagt | ggtagaattt | 300 |
| taatttttta | gtttattttt | tttcgttttt | ttttcagagt | ggagttttgt | tttgttattt | 360 |
| gggttgggtg | gttggagtgg | agtggcgtga | ttttggttta | ttgtaatatt | tggtttttag | 420 |
| gtttaagcga | ttttttttatt | ttagtttttc | gagtattggg | attagaggta | ttcgttatta | 480 |
| cgtttggtta | attttttattt | atttattttat | ttttattttt | agtggagatg | ggtttttatt | 540 |
| gttttggtta | ggttggtttc | gaattgattt | aaaatgattt | gttcgtttcg | gtttttttta | 600 |
| gttttggttt | tataggcgtg | agttattgct | ttcgtttatt | attttttttt | ttttttttta | 660 |
| attagagatt | tttggttaagt | tatttttttt | attttttttt | attttttttt | ttattttttt | 720 |
| tttttttttt | tttttgagtt | ataattatta | gttaggaagt | attttttttt | tatttttttt | 780 |
| tttggaattt | ttttattttt | tttttttata | gtttattttc | gcgttttttag | gttttaggggt | 840 |
| tatttggtta | gagtttgga | aatttttagt | tttttttttt | ttttttttata | gcgtgggggt | 900 |
| agggtattgg | tgttagttac | gtgttttttg | tttttgaaga | agatttttaga | ttggggtcgg | 960 |
| gggggtgggt | ttgtttattt | tttttagtatt | ttatcgtttt | tattatttgt | gttttttttt | 1020 |
| tttttttaaa | cggaaatttt | tgttttttcg | tttgtttata | gtcgtttaat | tgtaaaagtt | 1080 |
| aggtcgtttg | tgggagatta | tagatagcga | ttttttttat | ttatcgggtg | agaggagggt | 1140 |
| aaaggggcgg | ttgtaatattg | ggtaataatt | ttatttttat | tttagaagtt | atagttatat | 1200 |
| cgtttaagttt | tttttttttt | ttgttttagg | atagtttttaa | aaacgttaaa | agtatttttg | 1260 |
| ttgggttagta | tttggttagg | gtcgtttttt | ttgtttgttt | aggaacgttt | gttatttttag | 1320 |
| agagtttaag | tgatttggtt | cggttatata | gtagtagttc | gatagggtgt | tagggtttta | 1380 |
| ggggtagaag | gaggagagg | ttggtatttt | ttttatcgg | tcgcgtgatt | gtagtatcgg | 1440 |
| ggtgtagcga | agttttaagg | gttttaattc | gtgagttttt | ttttatttta | ggtaggggtg | 1500 |
| ggggagtagt | agtggggtgt | tggtttttaa | atgtaagata | agagttgggt | aagaaagttt | 1560 |
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| gcgcggacga | ggcgggggtt | gggttttaggt | ttgggtatat | gatttggttt | gaggtgttcg | 1740 |
| cggtttttat | tttattagtg | ggcgtttttt | ttacgcgtgg | tcgattatta | ttgggtcgggtg | 1800 |
| gtgaggttaa | tagaaatcgg | ttatttggga | attttagcgtt | tcgaggcgta | gtttaatata | 1860 |
| gtgaatcgac | gaaggtttaa | tggaaaaaga | cggttatggg | tatagattaa | tgataaagtg | 1920 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| gtaggggccc | gtttaagggt | tgggttaggt | tggtttgaga | ggcgggtggg | tataaaagt | 1980 |
| taaggcgggc | ggcggcggtc | gttcgtattg | tagagtcgtt | gtcggagggt | cgtttttaag | 2040 |
| ggttcgcgcg | ttgtcgtttt | ttcgggtcgt | tatgttggtt | ttcgtgtcgt | tggtgttcgg | 2100 |
| ttttttcggg | ttggtcgtcg | tcgagtttgt | cgtttatatt | aaggagtagt | ttttggacgg | 2160 |
| aggtaacgtt | tggtttcgtt | tcgaggtcgt | ttcgacgacg | cggtcgggtt | tcgattttgg | 2220 |
| atttgcgttg | tcgttcgtaa | ttatcgttta | gaggtttaat | acggtgggtt | ttcgggatta | 2280 |
| gagtcgcggg | cgattttttt | tttgcgtttt | tggggagcgc | ggagggcgta | gcggtttttc | 2340 |
| gcggcgggag | ttagggttag | ttcaggattt | tttgaaggta | ttcgaögtgt | taaattagag | 2400 |
| gttggaatgg | ggagtgtcgg | ggattttttt | ttttgttttt | agtagtttgt | ggttttcggg | 2460 |
| agatgtttgg | tgtggggggg | gattagtata | gtcgttttga | tttatatttt | taatttttta | 2520 |
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<210> 341

<211> 2526

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

400> 341.

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| atatttgtcg | agagttataa | gttgttgggg | ataggaaagg | agatttttca | tattttttat | 120 |
| tttaattttt | agtttgatac | gtcgggtggt | tttagagatt | ttcgggttaa | ttttaatttt | 180 |
| cgtcgcggga | ggtcgttacg | tttttcgcgt | tttttaggga | cgtagaagag | aaatcgttcg | 240 |
| cggttttagt | ttcgggaggt | tatcgtgttg | gatttttaaa | cggttaattac | gggcgataac | 300 |
| gtagatttag | gatcgggggt | cggtcgcgtc | gtcggggcgg | tttcgaggcg | ggattaggcg | 360 |
| ttattttcgt | ttägaäattg | ttttttgaag | tagacggtag | gttcggcgac | ggttaggctcg | 420 |
| aggaggtcga | gtagtagcgg | tacggatagt | agtatggcgg | gtcagggggg | cggtaacgcg | 480 |
| cgggtttttt | aaaacgattt | ttcggtagcg | gttttgtagt | acggacggac | gtcgtcgttc | 540 |
| gttttgtatt | tttatattta | ttcgtttttt | aaattaattt | gatttagttt | ttgggttcgt | 600 |
| ttttgttatt | ttgttattgg | tttatgttta | tggtcgtttt | tttttattgg | attttcgtcg | 660 |
| gtttattatg | ttaggttgcg | tttcggaaöc | ttgggttttt | agatggtcga | tttttattgg | 720 |
| ttttattatc | gattaatgat | ggtcgattac | gcgtgggggg | gacgtttatt | gggtggggtg | 780 |
| gggtcgcgag | tatttttaggt | taggttatgt | gattagattt | gaatttaatt | tcgttttcgt | 840 |
| tcgcgcgcgt | cgttgtttat | ttgggcgttt | aaagaaatcg | cgggagcgta | gttggtttta | 900 |
| cgcgggatcg | ggatttttgt | tttagttttt | ttttttttta | tttttttttag | gtggaggggt | 960 |
| tgggtaagggt | tttttttagtt | agttttttatt | ttgtatttga | gaattagtat | tttatgtttg | 1020 |
| tttttttatt | tttgtttggg | atgggagaga | gtttacggat | tggggttttt | ggggtttcgt | 1080 |
| gtattttcgg | tgtttatagt | acgcgggtcg | gtgggaagaa | tgtagtattt | tttttttttt | 1140 |
| tttttttaga | gttttggttag | tttatcggat | tggtgttgtg | tgatcggggg | aagttatttta | 1200 |
| gtttttttga | agtgaäagaö | gttttttgagt | agatagaggg | ggcgattttg | gttagatgtt | 1260 |
| atttagtaga | aatgttttta | acgtttttta | agttgttttg | ggataagagg | ggaggaagggt | 1320 |
| ttaacgatgt | gattgtgatt | tttgaggtgg | ggataggggt | attattttaga | ttgtagtcgt | 1380 |
| tttttttattt | tttttttaät | cggtaaataga | agggggtcgt | tgtttgtggg | tttttataaa | 1440 |
| cggtttggtt | tttgtaatta | aacggttata | ggtaggcgag | agggtagggg | gtttcgtttg | 1500 |
| gggagggaaa | aaagatatag | atggtagggg | cgataagatg | ttaggagat | gggtaggatt | 1560 |
| tatttttcga | tttttagttta | gagttttttt | tagaagttag | aggtacgtga | ttggtattag | 1620 |
| tattttgtttt | ttacgtttga | gaaaggaggga | aggagagttg | ggggtttttt | aaattttggg | 1680 |
| taaataagtt | ttggattttg | gagcgcggga | gtggattatg | gaaggaggga | atgaggggga | 1740 |
| tttaggaaag | aggggtgggga | gggggtgttt | tttggttaat | ggttgtgatt | tagaaaagag | 1800 |
| aggaaggaaa | aaatgaaaag | gaaaataaag | tggagtgggg | ggaatgattt | ggtaagggtt | 1860 |
| tttggttaaa | aaaaaaaaaa | agaaatggtg | gtcgggcgta | gtggtttacg | tttgtaaaat | 1920 |
| tagtattttg | ggaggtcgcg | gcgggtagat | tatttttaggt | tagttcgaga | ttagtttggt | 1980 |
| taataagggt | aaaattttatt | tttattaaaa | ataaaaaata | ataaaataat | aaaaattagt | 2040 |
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| tagtttaggt | gatagagtaa | gatttttatt | cgaaaaaaag | acggggggaga | atgaattggg | 2220 |
| aagttggggg | tttattattt | tttttaggta | gtatttagta | ttgttttagtt | tggttttttt | 2280 |
| tatgaggatt | tcggggatta | tttttaggtt | ttttgttatt | tttttttttg | tttttgtgtt | 2340 |
| aggtattttg | gggttttgccg | tttttttatt | gagggttagat | attgttttgt | ttgtttattt | 2400 |
| cgtattttttt | agtgttattt | gtagtatttg | gtatagaata | ggtttaaaaa | gtatttggtg | 2460 |

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<210> 342

<211> 10517

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens).

<400> 342

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| tttaattgtag | ttattggggg | aggaggggtt | tatttttttaa | ggtttttagtt | atttattttt | 120 |
| tttttgtatc | gttttttttg | gttaattagg | atggagtagg | ggttagtttt | tttgagggtt | 180 |
| aggttttttg | tgtttttgg | cgtttttgta | gagattgttg | tttgggggtt | tgtagtagg | 240 |
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| ggagatatta | tttttataat | tgggttgaaa | gtagatttat | tttggaggaa | tattattgtat | 180 |
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| ggagcgtagt | ggtgtgatta | tagtttattg | aattttgatt | ttttgggatt | taagggtatt | 2640 |
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| tgagttattt | atttgttttg | gtttgtagtt | taattttgga | gtgtataaat | ttgggttttg | 2880 |
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| aggagttagg | agttatcgga | attttatatt | gtttagtggg | tattggattt | tgaaataata | 3060 |
| gggaattttg | tttgggagag | ttatattttt | ggattggata | atatgtggta | ttataagggt | 3120 |
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| gggtatatata | gtttgggggtg | ttaaaggaa | atttgggatt | taggtatatt | agattttgta | 3360 |
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| ttagattttt | tttttataaa | aaaatttaaaa | attagtggga | tgtgatgggt | tatgtttgtg | 3540 |
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| tagggagtgt | cgattacgtc | gttgtatttt | agtttgggaa | atagagttag | attgttttag | 3660 |
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<210> 347

<211> 4022

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<220>

<221> unsure

<222> (1299, 1372, 1784, 3008, 3018)

<223> unknown base

<400> 347

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| ttatgttggt | ggagggttga | taattttttt | ttataattag | agttgtggaa | ggggagggag | 180 |
| agttagtatt | tggtgtttta | tatatattag | attagtttgg | aggtattttt | acggtgtgag | 240 |
| gttagattgg | gtaggggtta | tggattatgg | agatgtgatt | tagggaataa | agttagagaa | 300 |
| ggtaggttta | ggatgaatag | taataggggt | tgggatgatt | atgatttttt | tttaaaaaaa | 360 |
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| tgtagttttg | aatttttaga | tttaatcgat | ttttttgttt | tagtttttag | gatagttgag | 480 |
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| ggttatgttg | tttaggttgg | tttttaattt | ttgggtttaa | gttatttttt | tatttcgggt | 600 |
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| atataaagt | tttatgtgtt | taagttttaa | gtattttttt | tgtattttta | attaatatgt | 720 |
| tgaaatat | tagaatgac | ggattgtgag | attttttggg | ttttatattc | gtttgagttt | 780 |
| gaagttgga | tttttaattt | attatgtttt | tgaaatagaa | gcgttggtat | ttagtatttt | 840 |
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| aaaattttgt | gatattatat | attgtttaat | ttagaaatat | gattttttta | gattaagttt | 960 |
| tttattattt | taaaatttaa | tgtttattaa | ataatatggg | gtttcgggtg | ttttttattt | 1020 |
| tttatttttt | atgtttgtat | aacgtatagg | tatagcgggg | atttttggtg | atttggtttt | 1080 |
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| tatgttagta | attttagtgt | tttgggagtt | taaggttgaa | gaattatttg | aagttagaag | 1260 |
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| gaggattttt | taagtttttag | gaggttaggg | tttagtgagt | tatgattata | ttattgcgtt | 1440 |
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| aaaaaaaaaa | aagaattagg | gtggtattga | gaaattttat | tttgggtgtt | tagaaaagaa | 1560 |
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| gattttattg | attttgaaaa | aaaaatgtga | ttttatttgt | ttaataaaat | tagagttagt | 1680 |
| tacgttgatt | tagatttagt | tgtgttttaa | gaatttgata | aaattttttt | ttatttttag | 1740 |
| ttgaatgatt | agattaattt | taagtatatg | gaaggagata | gaantggata | tagataatta | 1800 |
| taatttaaga | ttaggataga | gggatattta | tagtttagtg | tttgattttt | tttatataat | 1860 |
| tattcgtttt | ttggaatgat | cgtttgaaag | gaaatttggt | ttagtttgaa | tgagaattat | 1920 |
| tgaatttag | tgttttaagt | atatttttat | ttttatgata | attttaatta | aaatttgatt | 1980 |
| taaattaatt | taataatagt | taatttaatt | atattattta | taagtttaatt | ttattaattt | 2040 |
| aatataaatt | aatttaattt | aagataaatt | taatagtttt | ttttatttaa | agattaaatt | 2100 |
| aaattaatgt | atattttcgt | atgtaattgt | tatttttatg | tattttattt | ttaaaattaa | 2160 |
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| tcgaagtaga | attttatttt | atttgaatt | taattttaat | ttgatttttt | attttaattg | 2340 |
| gtttttatat | ttcgttttta | atgttatatt | tagtatttta | tttggttaaa | ggaaattaaa | 2400 |
| tataattata | ttttattttt | cgagttagtt | tatagttttt | tttttattcg | ttatgggttt | 2460 |
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| tgtttattag | ggttttgggt | agtttttggt | ataagatgtg | gtatagatga | agttgatgtt | 2580 |
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| tatggcgtcg | gtttcgttcg | tatagcgtag | atgttgaatg | atgaattgga | tgatgtttta | 2940 |
| ggtttcggga | tatggtatat | gttgtagatt | atattcgcgt | aggcgtattt | ttgtggaatt | 3000 |
| agaaaganta | ggtaattntt | tttaattgga | attaaggatt | aaatggaaaa | gattaaatat | 3060 |
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| taataaattt | ttgtaattta | attttttata | attttagttt | ttttttttcg | aggatacggg | 3240 |

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| tttttagttt | tttttttttc | ggaattaagg | agtatgggtt | ttttttgtat | ttaagtttag | 3420 |
| aagttttgat | ttttatttat | gttttttcgg | aattttgagt | atttttttat | tttgggggtg | 3480 |
| gtaatggggt | attgtttaa | atgggtggga | attggaatta | aaaatttttg | ttaggtacgg | 3540 |
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| tatttgtata | gtagatagtt | ttgtaagatg | gtatcgtttt | tagatttagg | tttgtttatt | 3780 |
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| aaatataata | tgttttttta | gagtaggttt | gtttttaatt | taattataaa | gataatattt | 3900 |
| tcgttagata | taaagattgg | ataagtttgt | tagtattttt | ttataagatt | gaggattttt | 3960 |
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<210> 348

<211> 3326

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 348

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| taaatttttt | tttttttttt | tttttttttt | gagatagagt | tttattttgt | tgtttaggtt | 120 |
| ggagtgtagt | ggcgtagttt | cggtttattg | taatttttgt | tttttaggtt | taagtatttt | 180 |
| ttttgtttta | gttttttgag | ttgttgggat | tataggtatg | tagtattatg | tttagttaat | 240 |
| ttttgtattt | ttagtagaga | tggggtttta | ttaatgtttg | ttaggttggg | ttcgaatttt | 300 |
| tgatttgggtg | atttatttgt | tttagttttt | ttaaagtgtg | ggattatagg | cgttagttat | 360 |
| cgcgtttagt | tatttttggt | aaatttttga | gataatagtt | gggttggatt | aagttagtta | 420 |
| ttttggtttt | attgaatagt | tgaataaatt | aaatttttgg | aaattgatga | aattttacgg | 480 |
| agttaatagt | ggaggtatta | gggtttttta | gagttttcga | tttttttttg | agattataaa | 540 |
| ttgtgatttt | gtatgttatt | ttaatttttt | tttttttttt | tttaaatacga | ggtttttagtt | 600 |
| ttattttatt | tttttaggtg | gagtttaatt | gcgtgattat | agtttattgt | agttttgaat | 660 |
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| ttattatatt | tagataattt | ttaaattttt | tgggggggtcg | ggtatagtgg | tttacgtttg | 780 |
| taattttaat | attatgggag | gttgagatgg | gtggattacg | aggttaggag | tttgagatta | 840 |
| gttttgattaa | tatggtgaaa | ttttgttttt | attaaaaaaa | aaaaaaatag | aaaaattagt | 900 |
| ggggcgtggg | ggtatcacgt | atttgaatt | ttagttattg | aggaggttga | ggtaggagaa | 960 |
| tattttgaat | ttagaaggta | gaggttgtaa | tgagtcgaga | ttgcgttatt | gtatttttagt | 1020 |
| ttgggtgata | gagtgagatt | ttgttttaaa | aaaaaaaatt | tttttttttt | tttttgtaga | 1080 |
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| taatttttag | gtatataaat | ttggttttta | aaggttaaat | attttgttgg | agaaggggta | 1260 |
| ttggattttg | tatgaggatg | attttgattt | gggagggtag | gttagtaggt | atttttgttg | 1320 |
| tatagataga | gtgtataggt | ttggagaata | aggagtgggg | ggttattgga | attttatatt | 1380 |
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| tagaggattt | gtggattata | agattttttt | atgatgatag | tagtaatgta | tttgtggagt | 1500 |
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| attttgggcg | tgtttttttt | gtttttgttt | tttagatgaa | gtttttatga | gttatagggt | 1800 |
| ttgggtgtatt | taggggtgatt | tagtaattgt | agaatagtaa | gtgttagttt | tttttttttt | 1860 |
| tttatagttt | tgggtgtggg | agggggttgt | ttagttttta | gtagtatggg | gagggttttg | 1920 |
| gttagttttt | aggggttagt | agggtagggg | cggagttttg | gggaatgaag | gttttatagg | 1980 |
| gtttttgggg | gagggttttt | agtttttaagt | ttattatttg | tattcggaga | gttgtgttat | 2040 |
| tatgtggggt | tcgggtgttt | tttttatttt | gttcgtgacg | tggattgggtg | agagggggtta | 2100 |
| tgggtggggg | gatgtaggag | agggaggttag | ttttgattgt | taagttgagg | tttttttttt | 2160 |
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| aattttat | tagagatttt | gatgtttggt | tttttaattt | tgtttttagga | tatttagatg | 2580 |
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| gttttttgat | tttttaaatt | tgtatttttt | ttaaaattta | aaaataaaaa | gaaaaataaa | 2820 |
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| aaaatttttt | tttttagta | attgaatttc | gttataaggt | at | ggtttttagt | 2940 |
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| gtattagtta | tttaatttga | aatttaggga | agattgatag | aatttttagt | tttttttagt | 3180 |
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| tttatatttt | aaatttat | tttattcgag | tttttagttt | ttttttgtta | at | 3300 |
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<210> 349

<211> 3326

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 349

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| taggttttga | ggttggtggt | tgggtgttgg | ggagaggttt | tatgttttgg | gagtagagtt | 240 |
| gaatttaggg | attagggttag | gagatataag | atagcgttta | gattatattt | tgagtttggg | 300 |
| gattgggttt | tttgtggtga | tttgggggtt | tggattggga | gaagggaat | ttggtataag | 360 |
| ttgtggattt | tgaggggata | agcgggtgta | ggaattaggg | ataagtgttt | tatggcgagg | 420 |
| tttagtttgt | ggaagaggaa | ggttttggaa | agtttaggaa | gttttaggtt | gagaaaaatg | 480 |
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| gatgtagatt | tggggaatta | gagagttggt | agttgtggtt | ggggatgttt | atgttttttt | 600 |
| taaggaaaat | gtgggttatt | gaatgaagag | tttgggttta | agagttaggg | aatgaggagt | 660 |
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| agtattaagg | tttttgggat | agggttgggt | atttatagtt | gaatgggaaa | agttagtaga | 840 |
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| at | tttaacgtgta | gtaaaataatg | tggaaatttta | ataatttttt | at | 1980 |
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<212> DNA

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| tttgagttt | tttagatt | ggtttgaat | tttagatt | ttttattag | agtaatttt | 180 |

682
744

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| agtaagattt | tgttttaaaa | aaaaaaaaaa | aagaaaaaaa | aattagttaa | gatttgaaaa | 900 |
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| cgaatcgggt | tagtttcgtc | gttttttagaa | agttttgtat | ttcgtttttt | ttgtttgcgt | 1860 |
| tttcgttttt | tttagttttt | ttttcgcggc | ggggcgggat | taatcgtttt | tcgagtcgtt | 1920 |
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<210> 359

<211> 4098

<212> DNA

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| tttttatgtt | agtggtcgtt | agattaaagg | ttggtttgga | gataggagag | cgaaggaggt | 480 |
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| attcggagg | tttttatggg | attttaaaatt | ttgatttggt | agttgagtat | ttttttggta | 600 |
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| tagaaaggta | aaagggaagg | aatgatggat | taaaggggaa | atgagttttt | ttggaataat | 780 |
| aatttcgtag | aaaacggtag | gacgttggag | cgagaagggg | aagttatatg | ttataggaga | 840 |
| gtcgttggag | tagacgtttg | aggttttttaa | taattttggtg | taaagataga | tgtattttttg | 900 |
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<210> 360

<211> 13286

<212> DNA

<213> Artificial Sequence

<220>

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| aatatttttg | aggatagatt | ttgttttatt | ttgttatatt | tttagtattt | atatgggtat | 3000 |
| tttattagaa | agtttttatt | ttgttttaag | tttcgttaatt | cggtgttttag | tgaggggaaa | 3060 |
| tatgtttgta | atttaaaaag | tgaatatgtg | aaaggaaaag | tttttttgag | agtgttgtaa | 3120 |
| aataaatgta | acgtgattat | gaaaagaata | tgattaatat | ttttgatatt | tatttttttt | 3180 |
| gaagaaaatg | tattttgata | tgagtttttag | aagaaggaaa | ttataaggat | ttgtttatta | 3240 |
| ataggtatta | gagtatatat | cgtaggattg | tattttacgt | tttaagtatt | tttttagatga | 3300 |
| atttttgaaa | tattttttatt | ttaaaagtta | ttagatgttt | gttaatat | aagttttggt | 3360 |
| | | | | | | 3420 |